

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2511.—Vol. LIII.

LONDON, SATURDAY, OCTOBER 6, 1883.

WITH SUPPLEMENT. PRICE SIXPENCE BY POST, 21 4s. PER ANNUM

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER AND MINING SHARE DEALER.
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of Mining Stocks and Shares (British and Foreign), Consols, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, Water, and Dock Shares, and all Miscellaneous Shares.

Business negotiated in Stocks and Shares not having a general market value.

Every Friday a general and reliable List issued (a copy of which will be forwarded on application), containing closing prices of the week.

MINES INSPECTED.

BANKERS: CITY BANK, LONDON—SOUTH CORNWALL BANK, ST. AUUSTELL.

TELEPHONE NUMBER 1003.

SPECIAL DEALINGS in the following, or part:—

40 Asia Minor, 13s. 9d.

50 Akankoo, 6s. 3d.

50 Almada, 11s.

20 Bedford, 21 10s.

50 Bratsberg, 22 8s. 9d.

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BRITISH AND FOREIGN MINING OFFICES.

Messrs. PETER WATSON AND CO.,

15, AUSTIN PRIARS,

OLD BROAD STREET, LONDON, E.C.

BANKERS: THE ALLIANCE BANK (Limited).

Messrs. PETER WATSON AND CO.'S
BRITISH AND FOREIGN MONTHLY MINING NEWS
—STOCK AND SHARE INVESTMENT NOTES—MINES,
MINERALS, AND METAL MARKETS—SHARE LIST.
No. 858, VOL. XVII., for OCTOBER month, is ready, and
will be sent to customers on application.

Annual Subscription..... 5s. | Single Copy..... 6d.

MR. ALFRED E. COOKE,

DEALER IN BRITISH AND FOREIGN STOCKS AND SHARES

OF EVERY DESCRIPTION.

(FROM 75, OLD BROAD STREET).

ESTABLISHED 1853.

9, OLD BROAD STREET, LONDON.

MINE SHARES FOR SALE.

Mr. ALFRED E. COOKE can sell the following lots (or any smaller
number of shares) to immediate applicants at prices annexed, free of
commission:—

Where prices are not inserted, the market price of the day will be
taken, or offers may be made:—

15 Bratsberg Cop., 22 1/2.

50 Callao Bis Gold, 7s 6d.

60 Colombian Hydraulic

Gold, 6s.

35 Carn Camborne Tin &

Copper, 4s. 6d.

100 Nouveau Monde Gold

6s. 3d.

100 North Blue Hills, 1s 3

60 North Grogwinion

7s. 9d.

40 Devon Friend., 3s. 6d.

50 East Rose Lead, 12s. 3

7s. 6d. Blue Hills Tin, 5s.

10 Eberhardt Sil., 3s. 9d.

20 Frongoch Lead, 12s. 6

35 Grogwinion Lead, 11s 3

25 Grogwinion Sil., 26 1/2.

40 Home Mines Trust

14s.

40 Herodfoot.

20 La Plata Lead, 13s. 3d

25 Leadhills, 22 16s. 3d

25 Mounts Bay, 7s.

50 South Kitty Tin.

20 South Darren Silver-

Lead, 10s.

20 South Caradon Cop-

per, 2s. prem.

100 Tanker. Gt. Con., 2s. 9

50 Treavean Copper &

Tin, 8s. 9d.

50 Victoria Gold, 13s. 3d.

50 West Caradon Copper,

7s. 9d.

20 West Polbreen Tin.

30 West Gonamena Cop.,

4s.

5 West Kitty Tin, 21 1/4

35 Wheal Jaun Tin, 5s.

20 Wheal Crebor Copper,

22 17s. 6d.

20 Wh. Coates Tin, 5s. 6

30 West Crebor Copper,

5s.

20 Penstruthal Cop.,

15s. 3d.

10 South Kitty Tin.

20 South Darren Silver-

Lead, 10s.

20 South Caradon Cop-

per, 2s. prem.

100 Tanker. Gt. Con., 2s. 9

50 Treavean Copper &

Tin, 8s. 9d.

50 Victoria Gold, 13s. 3d.

50 West Caradon Copper,

7s. 9d.

20 West Polbreen Tin.

30 West Gonamena Cop.,

4s.

5 West Kitty Tin, 21 1/4

35 Wheal Jaun Tin, 5s.

20 Wheal Crebor Copper,

22 17s. 6d.

20 Wh. Coates Tin, 5s. 6

30 West Crebor Copper,

5s.

20 Penstruthal Cop.,

15s. 3d.

10 South Kitty Tin.

20 South Darren Silver-

Lead, 10s.

20 South Caradon Cop-

per, 2s. prem.

100 Tanker. Gt. Con., 2s. 9

50 Treavean Copper &

Tin, 8s. 9d.

50 Victoria Gold, 13s. 3d.

50 West Caradon Copper,

7s. 9d.

20 West Polbreen Tin.

30 West Gonamena Cop.,

4s.

5 West Kitty Tin, 21 1/4

35 Wheal Jaun Tin, 5s.

20 Wheal Crebor Copper,

22 17s. 6d.

20 Wh. Coates Tin, 5s. 6

30 West Crebor Copper,

5s.

20 Penstruthal Cop.,

15s. 3d.

10 South Kitty Tin.

20 South Darren Silver-

Lead, 10s.

20 South Caradon Cop-

per, 2s. prem.

100 Tanker. Gt. Con., 2s. 9

50 Treavean Copper &

Tin, 8s. 9d.

50 Victoria Gold, 13s. 3d.

50 West Caradon Copper,

7s. 9d.

20 West Polbreen Tin.

30 West Gonamena Cop.,

FERDINAND R. KIRK, STOCKBROKER,

5, BIRCHIN LANE, LONDON, E.C.

Fortnightly Accounts opened in all Stock Exchange Securities on receipt of

the usual cover

SPECIAL BUSINESS in the following or any part:—

40 Akankoo, 6s. 3d.

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DUCHY PERU (LIMITED), CORNWALL.

CLOSING OF THE LISTS.

The LISTS will CLOSE on TUESDAY, the 9th instant for TOWN, and WEDNESDAY, 10th instant for the COUNTRY.

THE "HOME MINES TRUST" (LIMITED), 8, OLD JEWRY, LONDON, E.C.,

Invites Subscriptions for the Shares of

DUCHY PERU (LIMITED), CORNWALL.

The Company will acquire an exceptionally rich property. Its native Silver and Silver-Lead Lodes form numerous junctions with the great Champion Lode of the district, thereby practically ensuring very high Dividends. The Chief Features are:—

- 1.—The acquisition of three large properties in the richest Silver-Lead producing district in England.
- 2.—The Silver-Lead from various points has realised the extraordinary price of from £700 to £800 per ton, while about £5 or £6 per ton is considered sufficient to raise and bring it to market.
- 3.—The Company takes over a "going concern" on which about £70,000 has been expended (vide Report), replete with the most modern machinery, and producing large quantities of mineral.
- 4.—To make it one of the foremost mines in Cornwall, it is estimated, only a small additional amount will be required.

DUCHY PERU (LIMITED), CORNWALL.

Incorporated under the Companies Acts, 1862 to 1880, whereby the liability of Shareholders is limited absolutely to the amount of their Shares.

CAPITAL £50,000, IN SHARES OF £1 EACH.

Payable as follows:—2s. per Share on application; 3s. on allotment; 5s. one month; 5s. two months, and the remaining 5s. three months after allotment. Should no allotment be made the deposit will be returned in full. No promotion money will be paid. The Vendor guarantees all expenses up to allotment of Shares.

DIRECTORS.

GEORGE FORMAN, Esq., Chairman of Home Mines Trust (Limited).

JAMES T. BROWNE, Esq., 9, St. Luke's Road, Westbourne Park, London, W.

BENNETT VAN PRAAGH, Esq., 9, St. Edmund's Terrace, Regent's Park, London.

JAMES KNILL, Esq., Etherley House, West Green, London.

BANKERS—LONDON: LONDON AND SOUTH-WESTERN BANK (LIMITED), 7, Fenchurch Street, London, E.C., and Branches.

CORNWALL: SOUTH CORNWALL BANK, St. Austell, Cornwall, and Branches.

SOLICITORS—Messrs. T. and H. R. GILL, 61 and 63, Ludgate Hill, London, E.C.

SECRETARY—MR. FRANCIS HUTLEY.

REGISTERED OFFICES—8, OLD JEWRY, LONDON, E.C.

PROSPECTUS.

This company is formed for the purpose of working an extensive and valuable range of native silver, silver-lead, and other lodes situated in the parishes of Perranzabuloe and Newlyn East, in the county of Cornwall, and known as Duchy Peru and Great North Shepherds Mines.

The property consists of three large sets, each, a mine in itself, extending over about 500 acres of mineral ground, containing nine proved valuable lodes, and many more discovered but not yet proved. It is acknowledged to be one of the richest mineral ranges in this traditionally rich district, some of the mineral having realised the unprecedented price of £8.0 per ton. (See Argall's report).

The dressing-floors are connected with the Great Western Railway by an inclined tramway, thus avoiding the greater portion of the usual haulage and carriage expenses.

The property to be acquired by the company is a going concern, well equipped with modern machinery in full working order, amongst which are:—

One 60 in. cylinder pump-work, with boilers attached.
80 fms. 18 in. pump-work, with main rods and connections complete.
One winding-engine of two 12 in. cylinders.
Steam capstan. Crushing machinery.
Dressing machinery.
Saw-mills, tramroads, rolling-stock, tools, &c.

The requisite buildings are erected and in good repair.

Following is a list of well-known mines in this marvellously rich mineral belt, in the centre of which Duchy Peru is situated.

Old Shepherds Wheal Golden Deerpark
Great Wheal Leisure Penhale and Lomax Mexico and Peru
Perran St. George Perran Consols Wheal Albert
Wheal Budin Consols Wheal Mount Great Retallack
Wheal Hope Cubert United East Wheal Rose
Treadmill

The foregoing mines have already produced many millions of pounds' worth of mineral.

The lodes passing through this property have been proved exceptionally rich in native silver, silver-lead, copper and other ores; the shaft has been sunk 80 fms., and levels driven at an outlay of over £70,000, of which this company will reap the full and immediate benefit. (See report of Nancarrow and Doidge.)

DUCHY LODGE.—This lode above the 70 has produced blende ore of a very superior character, highly charged with silver. During the last two years about 15,000 tons have been raised and returned, or about 500 tons per month, giving a large profit to the owners; and from the reports of mining engineers, it is stated that as depth is attained an equal quantity of silver-lead will be returned. (Vide Capt. Argall's report.)

Capt. P. ARGALL, in his report, says:—"The 60 was found to contain considerable quantities of galena (silver-lead), which in the 70 had largely increased, so that it appears highly probable that when the deeper levels of this mine are driven large deposits of argentiferous galena will be opened."

GREAT PERRAN LODGE.—Capt. ARGALL reports:—"The Great Perran lode

passes the property for about ¼ mile in length, two-thirds of this distance being in new or unwrought ground, while the remaining part that has been partially explored has produced large quantities of copper, blende, and other ores."

NORTH AND SOUTH LODES (Nos. 1 AND 2), have been proved to contain silver-lead, and from Capt. Argall's report this is of great importance, for it has been almost invariably the case where these lodes intersect the Great Perran lode (the champion lode) rich deposits of silver ore have been found.

MEXICO LODGE was the first silver lode worked in Cornwall, and proved to be extraordinarily rich in native silver and argentiferous galena, and has a long run in unwrought ground through the company's grant. Parcels of ore from this lode have realised over £700 per ton.

MOUNT AND TREBISKEN LODGE, identical in its output, has produced, as assayed by Prof. Warrington Smythe, ore worth £200 per ton, and where it intersects the elvan about 7½ tons realised the extraordinary sum of £1100. (See Prof. Kinahan's report.)

"**PERU LODGE** lies to the east of the last two. On this lode Wheal Peru was opened many years ago, and from it a fortune was amassed in a very short time. On the same lode a large deposit of silver was found, some parcels containing 2000 ozs. of silver per ton of ore."

"Where this Peru lode intersected the great iron lode has been already pointed out, and I have merely to add that there are about 400 fms. of this important lode between these two places that have never been explored, though there are at least two important intersections of cauners, as well as one of the great elvans in this piece of unwrought ground; and I can see no reason why these intersections will not prove as valuable deposits of native silver and galena as those just described on the same lode."

GREAT NORTH SHEPHERDS.—The reports show this is proved to be rich in silver-lead, assaying over 30 ozs. silver to the ton, and very little has been done to develop its resources in consequence of its having been locked up from mining operations for about 50 years, and with the improvements that have been made in modern machinery and dressing-appliance, it cannot fail to prove a most reliable addition to the property.

Capt. P. ARGALL says:—"I can come to no other conclusion than that already given—that under the iron shoots will be found valuable deposits of silver-lead, and that at a moderate depth below the present bottom of the mine, and with their numerous north and south lodes, rich in silver, their various cauners lodes and elvans forming important junctions and intersections, the great length (¼ mile) of the lode, with its shoots of lead, blende, and ore, show the property to be a very valuable one, and one that only requires a moderate capital to open out its resources, which with proper development would long continue a considerable source of profit to investors."

Capt. NANCARROW, Managers of Old Shepherds, and **Capt. DODGE**, Manager of East Wheal Rose, in summing up say:—"Looking at these various north and south lodes, which have proved so rich in the Peru part of the set, and their intersections with the Great Perran lode, this, with the great masses of minerals which have been met with in it and the important change which is

now taking place at the 70—silver-lead superseding the iron and blende, we consider it an extraordinary property, and if silver-lead is met with in the deeper levels in equal proportion to the mineral seen above, of which we see no reason why it may not be expected, a very rich and lasting mine will be opened up."

The directors, in basing their opinion on the statements of such eminent authorities as those who have reported upon this property, have no hesitation in saying they believe they are presenting an opportunity for the investment of capital which is seldom offered to those who are desirous of securing a share of the advantages which the introduction of Limited Liability as applied to mines has been the means of placing within the reach of capitalists both large and small, and it should be borne in mind that this is a going concern, upon which a large outlay of time and money has been expended, the benefit of which the shareholders in this company will doubtless reap in large and lasting dividends.

From the reports enclosed it will be seen that Capt. Argall says the lodes produced 70 tons of blende per fathom, and that during the last two years about 12,000 tons have been raised (equal to about 500 tons per month). Capt. Nancarrow and Doidge state, it may be reasonably expected that an equal proportion of silver-lead will be returned; basing an estimate on this the following should be the result:—

500 tons of silver-lead per month at £12 per ton.....	£6000
Less working or other expenses	3000
Profit per month £3000, or £36,000 per annum.	
Allowing liberally for all contingencies.....	11,000
And the result shows a profit of	£25,000

Equal to a dividend of 50 per cent.

It may also be reasonably expected that valuable deposits of native silver will be met with which would considerably enhance the profits.

The vendor, who is the promoter of the company, has fixed the following terms:—The purchase amount is £30,000, of which £10,000 is to be paid in cash and £20,000 in fully paid-up shares of the company.

The vendor undertakes to defray all costs and expenses of agency, brokerage, advertising, printing, and all legal and other charges incidental to the formation of the company up to the first allotment of shares.

The following contracts have been entered into, viz.: (1) dated the 21st September, 1883, between Cartmel Harrison and Samuel Browning Power of the one part, and James Thomas Browne of the other part; (2) dated the 1st October, 1883, between James Thomas Browne of the one part, and Edward Osmond Daniel of the other part; (3) dated the 2nd day of October, 1883, between Edward Osmond Daniel of the one part, and the company of the other part; and (4) between Edward Osmond Daniel of the one part, and Home Mines Trust (Limited) of the other part, of same date.

Copies of the contracts, Memorandum and Articles of Association, and the reports above referred to, may be seen at the offices of the company, where further information can be obtained.

Prospectuses and forms of application for shares may be obtained from the Bankers, Home Mines Trust (Limited), and at the offices of the company.

MINERAL RESOURCES OF THE UNITED STATES.

Some interesting details are given in a report for 1882, and the first six months of 1883, by Mr. Albert Williams, jun., Chief of Mining Statistics and Technology division, United States Geological Survey (Hon. J. W. Powell, director) is about to be issued, and an abstract from the advance sheets supplied to the Journal of the Franklin Institute furnishes the totals of the production of the more important mineral substances.

COAL.—The only statistics in which the trade is interested are those relating to the amount of coal which is mined for and reaches the market. There is besides a local and colliery consumption which is usually disregarded in statistics, and which ranges from 5 to 6½ per cent. on the total shipments. Of what may be called the commercial product, the quantities in 1882 were:—Pennsylvania anthracite, 29,120,096 gross tons; bituminous, brown coal, lignite, and small lots of anthracite mined outside of Pennsylvania, 57,963,038 gross tons; total, 87,083,134 gross tons. The spot value of the commercial product was as follows:—anthracite, \$65,520,216; bituminous and other coals, \$72,453,797; total, \$137,974,013. During the first six months of 1883 the output was:—Pennsylvania anthracite, 14,010,767 gross tons; bituminous and all other coals, 30,000,000 gross tons; total, 44,001,767 gross tons. The spot value of the commercial product during the first half of 1883 was:—Pennsylvania anthracite, \$31,524,226; bituminous and other coals, \$37,500,000; total, \$69,024,226. Including the local consumption, &c., the total product in 1882 may be stated at 92,219,454 gross tons—31,358,264 tons of Pennsylvania anthracite and 60,861,190 gross tons of other coals; and the value at the mines was:—Pennsylvania anthracite, \$70,556,094; bituminous coal, &c., \$76,076,487; total, \$146,632,581.

IRON.—The principle iron statistics for 1882 are as follows:—Pig-iron made, 4,623,323 gross tons; spot value, \$106,336,429. Iron ore mined, 9,000,000 gross tons; spot value, \$32,400,000. Domestic iron ore consumed, 8,700,000 gross tons; spot value, \$31,320,000. Imported iron ore consumed, 589,655 gross tons. Total iron ore consumed, 9,289,655 gross tons. Total spot value of all iron and steel in the first stage of manufacture, excluding all duplication, \$171,336,429. Anthracite consumed in all iron and steel works, including furnaces, 3,800,000 gross tons. Bituminous coal consumed in all iron and steel works, including furnaces, 6,600,000 gross tons. Coke consumed in all iron and steel works, including furnaces, 3,350,000 gross tons. Charcoal consumed in all iron and steel works, including furnaces, 107,000,000 bushels. Limestone consumed as flux, 3,850,000 gross tons; spot value, \$2,310,000.

For the first six months of 1883 the totals are as follows:—Pig-iron made, 3,352,019 gross tons; spot value, \$47,040,380. Iron ore mined and consumed, 4,500,000 gross tons; spot value, \$12,375,000. Imported iron ore consumed, 185,000 gross tons. Total iron ore consumed, 4,685,000 gross tons. Total spot value of all iron and steel in the first stage of manufacture, excluding all duplications, \$71,000,000. Anthracite consumed in all iron and steel works, including furnaces, 1,810,000 gross tons. Bituminous coal consumed in all iron and steel

works, including furnaces, 3,140,000 gross tons. Coke consumed in all iron and steel works, including furnaces, 1,780,000 gross tons. Charcoal consumed in all iron and steel works, including furnaces, 38,750,000 bushels. Limestone consumed as flux, 1,950,000 gross tons; spot value, \$1,072,500.

GOLD AND SILVER.—The Mint authorities furnish the following statistics for 1882:—Gold, \$32,500,000; silver, \$46,800,000; total, \$79,300,000; or an increase of \$1,600,000 over the output in 1881. For the first six months of 1883 the product is estimated at \$16,250,000 gold, \$23,400,000 silver, and \$39,650,000 total; the rate of production being assumed to be the same as in 1882.

PETROLEUM.—The production of crude petroleum in the oil fields of Pennsylvania and New York in 1882 was 30,053,500 barrels of 42 gallons each, worth, at an average spot value of 78¢ per barrel, \$23,704,698. During the first half of 1883 the yield was 11,291,663 barrels, worth, at an average spot value of \$1.00½ per barrel, \$11,308,778. In addition to the quantity above stated, California produced in 1882 about 70,000 barrels.

COPPER.—The production of copper in 1882 was 91,646,232 lbs., worth, at an average value of 17¢ per pound in New York, \$16,038,091. For the first half of 1883 the production is estimated at 58,000,000 lbs., worth, at an average price in New York of 14¢5c, per pound, \$8,500,000. The spot value of the copper at the point of production is a matter which cannot be stated with any accuracy; nor was any attempt made to ascertain the tons of copper ore mined. In 1882, 3,325,000 lbs. of bluestone, worth \$191,187, were made; and in the first half of 1883 the manufacture of bluestone is estimated at 1,662,500 lbs., worth \$95,593.

LEAD.—In 1882 132,890 net tons of lead were produced, worth, at an average value of \$95 per net ton on the eastern seaboard, \$12,624,550. For the first half of 1883 the production is estimated at 70,000 net tons, worth, at \$90 per ton, \$6,300,000. In this case, as with copper, it is impossible to state the average spot value of the lead, or the tons of lead ore mined. A very large proportion of the lead ore smelted is argentiferous, and is worked for its silver contents and not for the value of the lead. In the census year ending May 31, 1880, the amount of white lead corroded was reported at 123,477,890 lbs., worth \$8,770,699.

ZINC.—The production of metallic zinc in 1882 was 33,765 net tons, worth, at an average value of 54¢ per pound in New York, \$3,646,620. The production during the first six months of 1883 is estimated at 18,000 net tons, worth, at an average value of 4¢ per pound in New York, \$1,665,000. In addition to the spelter and sheet zinc made in this country there is also a large manufacture of zinc oxide made directly from the ore. As in the case of copper and lead it is impossible to fix an average spot value for the product, and the collection of statistics of zinc ore mined has not been attempted. In the census year 1880 the amount of zinc oxide manufactured, including that made from scrap zinc, was reported at 20,121,761 lbs., worth \$766,337.

QUICKSILVER.—In 1882 the production of quicksilver was 52,732 flasks (of 7½ lbs. each = 4,033,998 lbs.), worth, at an average price

in San Francisco of 36¢ per pound, \$1,487,537. During the first six months of 1883 the production was 22,740 flasks (= 1,739,610 lbs.), worth, at an average price of 35¢ per pound, \$613,213. During the year 1882 700,000 lbs. of vermilion were made in the United States, having a total value of \$315,000.

NICKEL.—The production of pure grain nickel in 1882 was 277,034 lbs., worth, at \$1.10 per pound, \$304,737. There was also a production of 50 per cent. copper nickel alloy containing 4582 lbs. of nickel, worth \$5040. The total nickel production was therefore 281,616 lbs., worth \$309,777. The only nickel reduction works in the United States were closed during the first half of 1883.

COBALT.—The value of cobalt ores and matte for 1882 was about \$15,000. The amount of cobalt oxide made was 11,653 lbs., worth \$32,046.

MANGANESE.—The production of manganese ore in 1882 was 3500 gross tons, and the spot value at the mines, estimated at \$15 per ton, was \$52,500.

CHROMIUM.—The production of chrome iron ore in 1882 was about 2500 net tons, worth, at an average price of \$40 per ton in Baltimore, \$100,000. The spot value cannot be ascertained.

TIN.—A trifling amount of tin ore was mined in 1882 and the first half of 1883, and production of metallic tin began on a small scale towards the close of the latter period.

ANTIMONY.—The production of metallic antimony, so far as ascertained, was 60 tons in 1882, worth about \$12,000.

BUILDING STONE.—It is estimated that the value of the building stone quarried in 1882 was \$21,000,000.

BRICK AND TILE.—It is estimated that the total value of the brick and tile made in the United States in 1882 was \$34,000,000.

LIME.—There were 31,000,000 barrels (of 200 lbs. each) made in 1882, having a total spot value of \$21,700,000 at the kilns.

CEMENT.—The amount of artificial Portland cement made in 1882 was 85,000 barrels, worth, spot, \$191,250. Of the cement manufactured from natural cement rock there were 3,165,000 barrels made, worth, spot, \$3,481,500. The total production of cement was 3,250,000 barrels, worth \$3,672,750.

CLAYS.—Complete statistics of the quantity of fire and potters' clay mined in 1882 were not obtained. The value of the whiteware made was over \$5,000,000.

PRECIOUS STONES.—The spot value of the precious stones found in 1882, before cutting, was between \$10,000 and \$15,000; after cutting between \$50,000 and \$60,000.

CORUNDUM.—It is estimated that 500 tons were mined in 1882, worth on an average only about \$12 50 per ton, crude and unground; total, \$6250. The value of the ground corundum manufactured during the same year was about \$135,000.

GRINDSTONES.—The value of the grindstones made from domestic rock in 1882 is estimated by leading dealers at \$700,000.

PUMICE STONE.—There were 70 net tons quarried in 1882, worth about \$1750.

PHOSPHATES.—The production of washed phosphate rock in 1882 by the land mining companies of South Carolina was 191,305 gross

tons; spot value, \$1,147,830. By the river mining companies, 140,772 gross tons; spot value, \$844,632. Total, 332,077 gross tons; spot value, \$1,992,462.

MARLS.—In New Jersey, 1,080,000 net tons of marl were dug in 1882. The average spot value at the pits is 50c. per ton, making the total \$540,000. There was a small yield of marls in some of the Southern States, the amount of which has not been ascertained.

[To be continued in next week's Journal.]

Meetings of Public Companies.

LINARES LEAD MINING COMPANY.

A general meeting of shareholders was held at the offices of the company, Queen-street-place, on Thursday.

Mr. WILLIAM COX in the chair.

Mr. H. SWAFFIELD (the secretary) read the notice convening the meeting, and the directors' report and statement of accounts were submitted.

The directors reported that the accounts for the half-year ending June 30 show a profit for that period of 2752l. 9s. 6d., which is an increase of 468l. 14s. 11d. on the profit of the previous six months.

The reserves of discovered ore are again reported to be 5450 tons—At the Pozo Ancho Mines, 4250 tons; at the Quintos Mines, 1200 tons; total, 5450 tons. The superintendent and mining agents' reports state that at the Pozo Ancho Mine "great attention has been paid to exploratory works" during the half-year, and that considerable lengths have been added to the principal levels. The raisings of ore were by this means kept up without trenching on the reserves. The same policy has been adopted at the Quintos Mines, and with similar results. The prospects at both mines for the new half-year appear to be good. At Majada Honda Mine the scale of working has been curtailed, in view of the low price which prevails for lead, so as to make the mine as nearly as possible self-supporting. The exploratory operations at this mine, although temporarily suspended, can be resumed at any time.

At the smelting-works the operations have been carried on without interruption, and the results obtained have been good. All the necessary particulars are furnished in the annexed smelting report. The rates of carriage have continued about the same as for some time past, but the directors are endeavouring to get them reduced; they have secured a reduction in the rates of freight from the shipping ports to London and Liverpool. The directors are unable to report any improvement in the lead market, prices continue very low, and must be unremunerative to any but the best mines. The balance at the credit of the profit and loss account on June 30 was 2855l. 17s. 7d.; out of this sum the directors declared a dividend of 3s. 6d. per share, absorbing 2625l., and leaving a balance to carry forward of 230l. 17s. 7d.

The CHAIRMAN moved that the report and accounts and balance-sheet be received and adopted. In doing so he said he would make a very few observations. The company was now in the 32nd or 33rd year of its existence, and the shareholders who joined 30 years ago had had no reason to repent their connection with it. At the present time the company was possessed of four mines. There was the original mine of Pozo Ancho, out of which enormous dividends had been paid. A few years ago the directors determined to shut off further work there because it was a losing concern, the lodes falling off between the 90 and the 120. A year or two afterwards it was determined to resume work; this was done, and they went down another 10 fathoms, but the price of lead went so low that the directors determined to again suspend operations. The next was Warne's Mine, which was part of the original property of the Linares Company, and the fact that this was paying well strongly induced the directors to leave off the working in the Pozo Ancho. At the present moment Warne's Mine was returning a capital lot of ore. Then there was the new mine of Majada Honda; there operations had not been actually suspended, but they had only kept doing such work as would produce enough ore to pay the expenses incurred. Being a new concern it would require a few thousands spent upon development, but the directors certainly would not spend that money whilst lead remained at only 12l. 10s. per ton. Then came another mine, called the Quintos, which had been in the possession of the company for a great many years, and was a very good mine. So that the two sources from whence they were getting a profit were the Pozo Ancho and Warne's Mines. He had been asked how it was possible for the company to work at a profit with lead at only 12l. 10s. per ton? Well, the fact was there were many mines in the Linares district which had been entirely shut up and the works suspended, and the hands thrown out of employment; this had enabled this company to get its work done at a much cheaper rate, and therefore the low price of lead had not told altogether against the company. He was pleased to say that Mr. Tonkin, the superintendent, was present, and would be happy to supply the fullest information as to the position of the mine.

Mr. S. J. WILDE seconded the motion, and said he was agreeably disappointed to receive such a good dividend. He would like to call attention to the fact that this was the only company that did not add anything to the reserve fund. He asked why the directors did not add something to the reserve fund? Referring to the reserves of ore, which were given in the report, he asked whether those could be worked at a profit at the present price of lead?

The CHAIRMAN said the company had 230l. at the bankers. As regarded the reserve fund the company had now close upon 1000l. in Consols, and there was the house at Cordova, which could be turned into cash at any moment.

Mr. JOHN TAYLOR said he would call attention to one or two points in Mr. Tonkin's report. Anyone reading that report must be convinced of the truthfulness and straightforwardness of everything which was placed before them by Mr. Tonkin. It was a plain, unvarnished tale. He was sorry that Mr. Richard Taylor was absent, as he was abroad, and could not attend the meeting. One or two points in the report might be looked upon with great congratulation, and there was one matter which they would treat with interest, and that was the improvement which was taking place in the deeper levels of the mine. It was stated that "the lode in the 130, driving east of Warne's engine-shaft, was poor in the first month of the year; since then it has been worth 1 ton per fathom, which is its present value." That meant a large amount of ore discovered and opened up since the last meeting. In the 135, driving west of Pell's engine-shaft, the lode was worth 1 ton per fathom during the first half of the period embraced in the report. This meant that there had been a maintenance of the reserve. There had been an important work commenced since the last general meeting, which was the cross-cut from the 130 to the 135, to communicate the north lode and Warne's Mine. When this was accomplished the water from the two lodes would be pumped from one engine-shaft. At Quintos Mine they had to look with interest at the driving of the 100 and 115. There was a fine course of ore seen in the 90 above, and from what was known of the district there was every reason to believe that that ore would be met with in the deeper levels. As to the general condition of the mine, it was very satisfactory, and he could sincerely congratulate the shareholders upon it at the present moment. Mr. Tonkin said he had great pleasure in assuring the gentlemen present that, with respect to the reserves, he never took anything into account but what could be taken away at a profit, even at the present low price of lead. (Hear, hear.) He considered that a lode worth about 3/4 of a ton per fathom could still be stopped away after levels were driven through at a small profit. What was below that he did not admit into the estimates at all. Every ton of ore estimated as reserve could be worked profitably. With respect to the work alluded to by Mr. Taylor, the principal quantity of water was at Pell's shaft, which was on the underlie. The main engine of the mine was at a considerable distance. At Pell's shaft they had a very powerful engine, and the object was to cross-cut from one to the other and bring the water to the engine, and suspend the working of the present horizontal rods. This would effect a saving of about 800l. a year.

The CHAIRMAN: What will it cost?—Mr. TONKIN said it was difficult to say, as they had to cross-cut the lode from one to the other; but it would not cost more than a year's saving. Owing to the suspension of other mines in this district this company had been able to get cheaper labour, and also better labour; in fact, the company had the pick of the labour of the whole province. They had also the use of the most improved explosives, by which the work was done much cheaper than years ago. The men were well content, and preferred working in this mine to almost any other mine in the district. An effort would shortly be made to further sink Pell's shaft. The local management and the directors had tried to keep down the expenditure in every way, and they were not forcing the mine in any way.

The resolution for the adoption of the report and accounts was then carried. On the motion of Mr. DONAGAN, seconded by Mr. S. J. WILDE, a vote of thanks was passed to the Chairman and directors.

The CHAIRMAN acknowledged the compliments, and proposed a cordial vote of thanks to Capt. Tonkin and the staff.

FORTUNA COMPANY.

A general meeting of shareholders was held at the offices of the company, Queen-street-place, on Thursday.

Mr. ROBERT HENRY in the chair.

Mr. H. SWAFFIELD (the secretary) read the notice convening the meeting, and the directors' report and statement of accounts were submitted.

The directors reported that they are pleased to be able to present to the shareholders a satisfactory report of the past half-year's operations; and, as already notified to them, to pay an increased dividend. The accounts show that the profit amounted to 4802l. 9s. 1d. Comparing this with the profit for the half-year to Dec. 31 last, 3508l. 11s. 5d., it will be seen that the increase shown on the present account is 1192l. 17s. 8d. Notwithstanding the quantity of ore raised during the six months to June 30, the reserves have not diminished—they are again estimated at 9700 tons—at Salidos and Canada Incoima Mines, 8500 tons; at San Antonio and San Francisco Mines, 1200 tons=9700 tons.

By reducing the number of shafts at some of the least productive parts of the mines, the expenditure has been much curtailed, but sufficient exploratory work has been carried on to maintain the productive power of the mines. At Canada Incoima Mine the best levels during the past six months have been the 90, west of San Pedro shaft, and the 100, east of Lowndes's shaft, and the prospects at these levels are still good. At Salidos the 130 and 145 have opened out good ore ground, and are still turning out well. The

160 has lately become productive, having reached the point under which the lode was rich in the level above. The lodes in the San Antonio and San Francisco Mines have improved of late, and the prospects at these mines are more favourable than for some time past.

At the smelting works the produce of lead from the ore was slightly better than for the previous six months, whilst the cost of working remained about the same. The directors have to report that there was a further decline in the price of lead during the past six months, and that as yet no recovery in the market has taken place. The last price obtained for silver-lead was 12l. 10s. per ton. The audited accounts show that the balance at the credit of the profit and loss account on June 30 was 4802l. 9s. 1d. Out of this a dividend of 3s. 6d. per share has been declared and paid, absorbing 4375l., and 218l. 15s. has been placed to reserve fund = 4593l. 15s., leaving balance to be carried forward, 247l. 1s.

The CHAIRMAN said he always appeared at these meetings under somewhat of a disadvantage, because as all these companies were very intimately connected, both as regarded the directors here, and also as regarded the management in Spain, what was said by the Chairman of the first company really had reference to all the others; therefore, he had but little to add to what had been already said. The explanation given by the Chairman of the Linares Company with regard to how it was that that company had been able to make profits during the present low price of lead, of course applied equally to this mine. But there was one point to which Mr. Cox had not referred, and that was as to the tributors. From that source the company had derived very much of the advantage which had accrued during the past six or 12 months. The shareholders here had undoubtedly one of the best, if not the best, mine in that rich mineral district, and which, perhaps, promised more lasting endurance than any of the others could do. From the tributors they had received a great deal of ore, which had helped materially to increase the profits, and without such extraneous aid it would have been impossible for the company to have shown the profits they had done during the past half year. This was greatly due to Mr. Tonkin's foresight, which enabled him to take advantage of these things, and, therefore, the shareholders were much indebted to him for what they had got. It might interest the shareholders to know that since the company commenced the payment of dividends it had paid an average of 19 1/2 per cent. per annum, although it was not doing so well at present. He moved the adoption of the report and accounts.—Mr. S. J. WILDE seconded the motion, and said he was glad to see that in this company they added something to the reserve fund.

Mr. JOHN TAYLOR said, in reply to questions, that by improved ground he took it Mr. Tonkin meant ground of a richer character, and containing more ore than that which had been previously reported upon. There was one paragraph in the report which all he was sure had read with interest, and one to which attention should be called. That was with regard to the expenditure being curtailed, but that "sufficient exploratory work had been carried on to maintain the productive power of the mines." He trusted all would realise what had taken place during the last six months. As much as 2855 tons of pig-lead had been sold, in addition to which there had been sold in Spain 225 tons of ore. It was a very great thing that sufficient exploration work had been carried on to maintain the productive power of the mines, and that 3000 tons of pig-lead had been sold, and there was still as much to cut away on as when they started. A considerable length of rich ore had been opened in the Canada Incoima. In the 100, east of Lowndes's shaft, there had been found a good lode, and also in the 120, east of O'Shea's engine-shaft. The Los Salidos had also greatly improved. The reserves at this mine were exceedingly large, and they had been maintained in spite of the output during the past six months, and he thought that the profit that had been made at the present miserably low price of lead could only convey to them, as it did to him, volumes as to the value of their property, and they should all feel satisfied with its present position.

Mr. TONKIN said they were not disappointed in the 175, because it had not reached the ore met with in the 145 and 160. The 160 was still in advance of the 175. Ore ground was being struck in the 120, but the 160 would take up the running, and subsequently the 175. There was good reason to expect a continuance of the productiveness of the lode in depth. As a rule, it had been found that the very rich wide lodes did not make any depth, but a lode like the Salidos, giving 3 tons to the fathom, was one likely to continue. They looked forward with great hope to the continuance of the rich lode in Los Salidos. They had a very good winding-engine and excellent machinery. Tributing was at present going on very successfully, but they had not increased the number of hands. The men were working at a lower tribute, and giving a fair profit. By keeping on the more productive parts they might keep up the returns, and that at a cost that would leave the company a small profit. He did not think they could do any better. They intended to continue on in the same way for some time to come, and hoped to continue getting the same profit from the concern.

Votes of thanks were then accorded to the Chairman and directors, and Mr. Tonkin, and the proceedings were brought to a close.

ALAMILLOS COMPANY.

A general meeting of shareholders was held at the offices of the company, Queen-street-place, on Thursday.

Mr. WILLIAM COX in the chair.

Mr. H. SWAFFIELD (the secretary) read the notice convening the meeting, and the directors' report and statement of accounts were submitted.

The directors' report stated that the six months' profit was 5399l. 10s. 5d., an increase of 1011l. 15s. 3d. on the profit for the corresponding period of 1882, and an increase of 1730l. 13s. 9d. on that of the half-year to Dec. 31. The large reduction made in the mining expenditure is the cause of the increased profit now shown, the expenditure of the two past half-years having been 15,378l. 7s. 1d. to end of Dec. 1882, and 12,821l. 9s. 10d. to end of June 1883, showing a decrease of 2557l. 6s. 3d.

A considerable quantity of ore raised from the mines has been delivered by tributors, in accordance with the contracts made with them, and resulted in a good profit to the company. The prices paid to the tributors for the ore they deliver is generally regulated by the price of lead, and leave a fair margin for profit. Since the last general meeting the price of lead has declined about 10s. per ton, and, as yet, there are no signs of an improved market.

The mines have opened out well during the past six months, and the deepest level has fortunately been the most productive. The prospects in depth continue satisfactory, and in some of the shallower levels the lodes are likely to be very rich. The reserves of discovered ore are estimated at 3000 tons, being the same quantity as in March last. The operations at the smelting and delivering works at Cordova have been carried on with great regularity, and the results obtained, both in regard to produce and cost have been good.

The balance-sheet shows that the amount standing to the credit of the profit and loss account on June 30 was 5870l. 2s. 2d.; out of this the directors have declared and paid a dividend of 3s. per share (3250l.), and they have placed to the reserve fund 250l. = 5500l., leaving a balance to be carried over of 170l. 2s. 2d.

The CHAIRMAN, in moving the adoption of the reports and accounts, which were taken as read, said if the Chairman of the Fortuna Company felt a difficulty as to what he was to say, being afraid that it had all been said by the Chairman of the Linares beforehand, what was the Chairman of the third company to say? Well, he might say that he knew something about this mining property, and he would say if there was not something that could be said. They did not pay weekly wages in this Company, they paid on piecework. If they examined the accounts they would find they were paying only a little more than half what they had previously paid per metre for driving. The men did considerably more work than they previously did, so as to make up their wages; therefore they made a living and left the company a profit. There was one clause on page 5 in the report where they were told everything on the subject. "A considerable quantity of the ore raised from the mine had been delivered by tributors in accordance with contracts made with them, and the sale of it had resulted in a profit to the company." The contracts made with the tributors were such that the company paid them a percentage upon the ore they raised, and that percentage was calculated upon the price of lead in London, and he need not mention that at Linares they had men who did not make contracts which would run away with the entire profit arising from the ore. He believed this company had considerably increased its profit by letting out portions of its ground to tributors. They considered they got a fair percentage of the ore they raised; if they had sometimes to work very hard and got very little they made bad wages; but they were always in the hope and belief that they would come upon something which would give them a large amount of money with a small amount of work. They took the good with the bad. That was the principal source from which the company had made their profit. To be able to pay in one year a 5s. dividend on the present price of lead seemed to him perfectly astonishing. With those observations he would move that the report and accounts be adopted.

Mr. FOSKETT had great pleasure in seconding the resolution, and he wished to express his surprise at the large dividend they had been able to pay. He had no doubt as regards its being honestly earned, because unless they were able to pay it they need not, as it was not expected. If there was any question about it he thought they could have declared a lesser dividend.

The CHAIRMAN, in reply to Mr. WILDE, remarked that the railway went right into the works. The company used to have to pay for carting from the mine to the railway, but now they carry the carts in the trucks, and now the trucks went right to the mine, so that there was a large saving in carriage.

Mr. WILDE thought the report was very satisfactory. He was glad to see the mine rich in depth, because that generally meant the continuance of profits. Mr. TONKIN observed that he could confirm what the Chairman had said with respect to the great desire of the men to work on tribute. Sometimes some of the men made what they called a good haul, and that would stimulate others to go in and venture. They would work on, and even sink shafts from the surface, and drive cross-cuts, and do work which the company could not do on their own account if they paid by measurement. In many cases they had been fortunate enough to come upon shoots of ore which had paid them for their patience. They still went on month after month finding just as much as they were taking away.

Mr. TONKIN, in reply to Mr. FOSKETT, said as a practical miner he preferred tribute work, but that depended upon circumstances. When they had to give too much in price they could not depend upon the honesty of the men, as they would arrange matters among themselves. To have tributors at all places was not practicable, but whenever they could do it they set the men on tribute. The tributors carried on at this company's mine was altogether a separate branch. It did not interfere with the regular working of the mine by the company. It was not possible for the company to work as the tributors did. It was very encouraging to find that the lode went down deep, and at a cost of little more than 1l. per metre they had driven a very good length of ground. A rock-drill was not required for the kind of work they did. The nature of the ground varied so much that it was only by the usual half-yearly reports they could obtain

a fair idea of the average value of the ground they were opening up. In another section of the mine, called San Victor, they had a splendid vein of ore, which was likely to turn out well, and altogether the prospects of the mine were very good. Nothing further was now required but a better price for the lead. The mine was well laid out and well stocked with machinery, and if they could only get an alteration in the price of lead all would be well.

Mr. TONKIN, in reply to Mr. WILDE, said that the tributors did dead work as well as other work.

The motion for the adoption of the report and accounts was then agreed to, and votes of thanks to the Chairman and officers of the company brought the proceedings to a close.

TANKERVILLE GREAT CONSOLS MINING COMPANY.

The ordinary general meeting of this company was held at the mines, near Ministerley, on Wednesday.

Mr. PETER WATSON (Chairman and managing director) in the chair.

Mr. J. H. MURKIN (the secretary) read the notice calling the meeting, and the report of the directors. The accounts and the report of Capt. Arthur Waters and Son were taken as read.

The directors' report was then read as follows:—

Your directors have not the pleasure of again meeting the shareholders on the mines, when they submit their usual report, together with the accounts for the four months ending Sept. 1 (the accounts for the previous eight months having been presented at the general meeting in July last), thus completing the twelve months of the financial year. From the accounts now presented it will be seen that for the four months which are embraced the returns of ore from the three mines have amounted in the aggregate to 8145l. 10s., while the total costs at the mines, including merchants' bills, were, for the same period, 3574l. 12s. 5d. From the latter sum has to be deducted capital expenditure, 511l. 18s. 1d., leaving the net costs 3062l. 14s. 8d. In the eight months to May, 1883, comprised in the accounts above alluded to, the total returns were 7877l. 7s., and the net expenditure 17,229l. 2s. 11d., so that while the May accounts showed a loss on the working of 9241l. 15s. 11d., the present statement shows a loss of only 17l. 4s. 8d. This improvement has been effected notwithstanding a further serious depreciation in the price of lead ore. Your directors may also call attention to the fact that, although the costs, payable Sept. 7 (six days after the closing of the books), are charged in the accounts, no credit is taken for the ore sold on Sept. 5 and 13. The number of the 10 per cent. preference shares allotted to Sept. 1 was 15,472, and as the shareholders had failed to subscribe for the balance—9208 shares, created by resolutions unanimously passed at the meetings, held for the purpose of increasing the capital, your directors have been compelled, in August, to make a further call of 2s. 6d. per share, to meet the liabilities of the company, and provide for the cost of the extensive operations now in progress. This call is included in the accounts, and will explain the large amount (3042l. 2s. 6d.) unpaid at date of the balance-sheet. Your directors, at the meeting in July, brought before the shareholders the necessity of the whole of the preference capital being issued, and in the circular sent out after the meeting gave full explanation of the position which the directors were in, and as both dividend and principal will rank as a charge against the property, it is only to the ordinary shares, it is manifestly to the interest of each shareholder to provide at least his proportion of the preference capital. It would be a matter of considerable regret were the ordinary capital to be sacrificed now that the mines are in full operation, and so much of the necessary deadwork has been accomplished, while even a moderate rise in the price of metals from their present deplorable rates would add immensely to the immediate value of the property, and adopted, together with the statement of accounts, and report of the directors, to the shareholders, who may not have had the opportunity of seeing the details of the accounts, and the details of the managers' report. The managers and agents in attendance will give any further information which may be desired. Your directors, however, think that from the reports and accounts now presented, and from what the shareholders have seen for themselves, the latter will join your directors in considering that with the aid of the moderate amount of capital to be derived from the issue of the balance of the preference shares there is every reason to anticipate that the Tankerville Great Consols Company (Limited), possessing really four extensive and important mines, would soon enter on a progressively prosperous career. At this meeting your auditor, Mr. Henry Catley Stewart, retires, but being eligible offers himself for re-election.

The CHAIRMAN said: Gentlemen, you have heard the report of the directors read, which was promised when we issued the statement of accounts to the shareholders last week. I may say that I am somewhat disappointed that out of about 600 or 700 shareholders we have such a small attendance here to-day. The object of this meeting, as stated at the formation of the company, was clearly understood. In fact, it was the request of a very large number of shareholders that yearly meetings should be held on the mine, and half-yearly meetings in London. That was cordially agreed to, and I have now nothing to say against it. I think at any rate once a year it is right that shareholders should assemble on the mine, and see the property they possess for themselves. If they do not choose to go underground, and see what is in the bowels of the earth, they have, at all events, the opportunity of seeing what has taken place at surface. The shareholders will have seen, despite the inclemency of the weather, the expenditure that has been incurred, and they will also have realised that this expenditure must be met by capital. In moving "That the report of the directors be received and adopted, together with the statement of accounts and report of the directors," I may call your attention to what took place in October, on the occasion of the last meeting here. The shareholders at that time appeared to be exceedingly pleased with the position of affairs which then presented themselves, and they unanimously adopted a resolution that we should raise capital by a 10 per cent. preference share to the amount of 27,500l., in as many shares of 1l. each. The shareholders had notice of what was intended, and they came to the meeting fully prepared to support the resolution that was then proposed. A meeting was called within a month afterwards, at which that resolution was unanimously confirmed. The directors, finding such unanimity amongst the shareholders, naturally thought that it agreed well for the subscriptions coming in—not from the directors alone, but from the shareholders as well. They believed that the amount of capital required would be forthcoming without any pressure whatever from the directors, especially seeing the very elaborate report which was given upon that occasion by Capt. Arthur Waters and his son, supported as it was by the testimony of the agents. The directors thought there was something really important in the sinking of the shaft at Tankerville, which would commend itself to the shareholders. On that occasion Capt. Waters gave a most explanatory of the position which Roman Graves had taken during the last 10 years, in the course of which time it has paid 120,000l. and upwards. The richness of that mine was due to three lodes, and he concluded that by sinking the Tankerville shaft similar results would take place at the expected junction of two lodes. This matter was thoroughly gone into and understood by the shareholders present at that meeting. Judge, then, the surprise and the regret of the directors that the shareholders did not, one and all, come forward and subscribe the capital then needed. The directors hold the largest interest in the undertaking; but they each and all subscribed their property, and even more, and the bond belief that they would presently in the total amount of 27,500l. made up. Had their anticipations been realised the position of the property would have been very different in regard to its development from what it is to-day, for the money so subscribed would have enabled us to carry out that very desirable object—the sinking of Tankerville shaft. We should immediately have given instructions to Capt. Waters to push on the shaft, but this he has been unable to do, for the reason that, instead of our 600 or 700 shareholders subscribing their quota, and supporting the action of the directors, only about half that number of shareholders have come forward and done so. Now, this is not a state of things the directors are less to expect. (Hear, hear.) Whether it is to be attributed to lukewarmness or indifference on the part of the proprietors the effect is just the same. They have left the burden to be borne by the willing horses, whilst the shares, thanks to their apathy, which otherwise would be at a fair price, have been falling in the market. In fact, but for the action of the directors, and certain of the shareholders, the mines, so far as the general body of proprietors are concerned, would have been things of the past. Circular after circular has been issued by the directors, and by the secretary, almost without result, and now I have come here to ask you the question, "What are we to do? Are we to abandon these mines? Ought we to do so, having gone to the enormous expense which they have entailed. Are we now, after all our efforts to bring matters to their present state, to throw up the sponge? I have stood by these mines from the commencement for a number of years, and I am ready and willing to do so still; but, speaking in the name of the directors, and also in the name of those shareholders who have subscribed to the preference shares, I say it is not right and fair that the other shareholders should stand aside and not contribute now, especially when the mines are in a very different position from what they have been. I would impress upon every shareholder the necessity of coming forward and subscribing his quota, in order that this shaft may be vigorously pushed down to the required depth. We want another compressor and rock-drills, but we cannot order them because we have not the requisite funds. What should we have done had it not been that the directors had made themselves liable for 3500l.? We made ourselves responsible jointly. Why should the directors make themselves personally responsible, or why should I lend the company 500l.? Out of the 27,500l. asked for we have had only 15,000l. taken up, leaving about 9000l. shares yet to be taken. I think in all fairness and in justice to those shareholders who have subscribed, as well as in justice to the directors, who have made personal advances, that it is the duty of those shareholders who have not subscribed to come forward and do so, but whether they do so or not, I hope that those shareholders who have already subscribed will not forget the position in which we stand, and even now give us a helping hand in connection with this matter. The position of the accounts is very different from that which was presented to the shareholders at our meeting 10 weeks to-day—July 25. You will see that we have sold from Tankerville lead and blende to the amount of 8152l. 5s.; from Pennerley lead and blende to the amount of 3377l. 5s., and lead and blende from the Bog Mine to the value of 2506l., amounting to 3533l., or a total from these mines of 8145l. 10s. On the other side the costs at these mines, less the capital expenditure of 511l. 18s. 1d., amounts to 3062l. 14s. 8d. So far as the development of the mines is concerned, the accounts show that there is not a very great deal of loss, although we have had to do a heavy amount of deadwork. (Hear, hear, and cheers.) This deadwork must increase if we are to expect any good results in the future. We must sink these shafts and drive these levels, and, as I said before, we must have capital with which to do it. In the face of the unfortunate state of the lead market, we have been unable to make that profit which otherwise we should unquestionably have made. (Cheers.) Ten years ago the price of lead ore was 17l. 10s. a ton, which is about 10l. more than it is to-day. If we had had this 10l. at our command the profit upon the working of the last four months embraced by the accounts would have been between 6000l. and 7000l., but we have not got it. Instead of 17l. 10s. per ton, we have simply an average of about 7l.—a very unfortunate state of things—not for this mine alone, but for all lead mines, and one which makes it exceedingly difficult to conduct them. To

him on the subject. Mr. Moore, I have every reason to say, is a just and fair man, and I hope that he will see the equity of meeting the shareholders in this matter. It cannot be right that this mine should be worked solely for the benefit of the lord of the soil. At the present moment he is the only gentleman who is getting much, if anything, out of the mine; but I hope before we meet again that we shall be able to do something to you of a satisfactory nature as coming from Mr. Moore on the subject. (Hear, hear.)

On the motion of Mr. BREWSTER, the proceedings closed with a hearty vote of thanks to the chairman, the directors, the manager, and agents.

LEADHILLS SILVER-LEAD MINING AND SMELTING COMPANY.

The 13th ordinary general meeting of shareholders was held at the offices of the company, Finsbury Circus, on Friday, Sept. 28, Mr. PETER WATSON (the managing director), in the chair.

Mr. FELIX F. WILSON (the secretary), read the notice calling the meeting, and the report and accounts were taken as read.

The CHAIRMAN said:—Gentlemen, the directors have very much pleasure in meeting you here to-day in one sense—so far as the development of the mines is concerned, and so far as regards the improvements which have continually taken place at your smelt mills. The directors may congratulate themselves, their local management, Capt. Waters, the consulting engineer, as well as you, gentlemen, the shareholders on the position which you occupy to-day in the midst of the greatest gloom which has hung over the lead-mining industry of this country in the memory of living man. (Hear, hear.) I believe it is a fact that we have never had the price of lead so low as at the present time—7½ per ton; therefore, if the directors, instead of meeting you here with a credit balance in favour of the undertaking, had met you showing an amount of loss, I should still have said that the directors and the local management had done everything they possibly could for the welfare of the company. I mean to say this—that whether it is a profit or a loss the directors of this concern and the local management have done all they could to give you favourable results. If the lead had not been there, and if we had not found it in sinking shafts and driving levels we could not have presented you with such a satisfactory statement as we have to-day. It is no use shareholders attacking me or censuring the directors because lead ore has come down from 17½ to 7½ per ton. We should not be paying a dividend had not we kept at work vigorously, sinking shafts and driving levels, and improving our smelting operations to the greatest extent possible. We found ourselves some time ago with a credit balance of about £5000, and there was a great cry against the management and the directors for such a state of things, and anonymous communications appeared in the mining papers asking whether the directors were not ultimately going to lead the shareholders into winding-up. But things have turned out very differently to that, and this shows the wisdom of the vigorous policy which the directors and the local management have pursued during the past four or five years. (Hear, hear.) If it had not been for that we should not have met you to-day with a credit balance, but, on the contrary, a very heavy loss. So far as the accounts are concerned what do we find? We paid you a dividend of 3s. per share on Aug. 15, 1882, which was £3000; we gave you a dividend of 4s. per share on June 12, which was £4000, making £7000 altogether; and we find ourselves with a balance of over £4000, to the end of the last half-year—June 30. Well, we have valued the stock which we have in hand of lead ore with the pig-lead which we had in hand at the end of June, after deducting all expenses of every description, carriage, discount, and everything, we put that price down at 12½ per ton, which you will see under the head of the profit and loss account. Since then we have sold some pig-lead at a better price than that, and we find ourselves at the board meeting to-day in a position to declare our not promised dividend, but we hoped that when we had realised the lead ore which we have in stock or some portion of it, we should be able to give the shareholders a dividend of 3s. 6d. per share, and I am happy to-day to tell you that the directors finding themselves in a very good financial position have declared a dividend of 3s. 6d. per share, payable on and after October 11. (Cheers.) Our mine has somewhat fluctuated during the last six months; sometimes the ends are looking somewhat poor, at other times they are looking very rich indeed. In Leadhills there are various shoots or deposits of lead which are continually met with; sometimes they are rather poor, because we have to drive some distance in the levels into the shoot. I hope in the course of a month or two we shall be just tapping a rich deposit of ore south of Wilson's shaft. It has gone down there very rich, and we hope to find it in further driving. We have other improvements; and, on the whole, the mine is looking even better than when the last report was sent out. (Cheers.) I was on the mine about a fortnight ago, and I find that during the 12 months we have spent about £1000, altogether, in improvements in the mine and improving the dressing-floors at Reid's shaft, and we are putting up a new process by which we shall save a large quantity of slime, and we shall save one-third of the cost of the present process, where it has not been well indeed. That is a matter of positive fact for the benefit of the undertaking, and we shall save a considerable amount of slime ore which has been hitherto allowed to waste away. Then there are the various improvements which have been made in the dressing-floors; we find these things out, and we are forced to do them. The fall in the price of lead has stimulated us to greater exertions than before, and we continue them. As regards Wilson's shaft, somebody said it was looking like a Thames Embankment which we are making there; at any rate we are making large banks and kinks, by which we shall save more than at the present time. We shall send it to Reid's dressing-floors along the railway which we put up, and which has been paid for. With respect to the smelt mills, we are going to have another condenser there for catching fumes; we are building a bridge across the brook closer to our smelting-works, and altogether we are going ahead in laying out money. In addition to what you see on the face of the balance-sheet, these matters are absolutely necessary. It is pointed out in Capt. Waters' report that at the smelt works great improvements have been made. He says:—"I believe if gone into minutely, the logic of facts would prove that for every 20s. spent a return of 50s. has been made." I believe I can confirm that in every shape and form. Having referred to the mode of smelting adopted at Leadhills, and given some details regarding it, the Chairman proceeded:—"If I had went up to a fair price there would be an additional 4s. per share for the shareholders per annum. We must hope that times will improve. We are improving our smelting operations still further, and we hope to be able to further increase our returns. I cannot say more to you. I will not detain you further except to state that we are going on very harmoniously and very pleasantly, and we do not now see any of those anonymous communications about, or any of those insulting communications to the directors, which we sometimes used to receive from Scotland and elsewhere. We are doing the best we can for the shareholders. The directors are the largest shareholders in the undertaking, and I think I may say we may fairly congratulate ourselves on the position of the undertaking. (Cheers.) I would say one word with regard to the local management. I think there is very great credit due to the local manager, Mr. Thos. Newbigging. I cannot say too much in his favour. I have watched his career carefully, and he has given, from time to time, great satisfaction. We had under consideration two or three months ago that we should make him a little present, and also Mr. Altherton, the second in command, both of whom the directors are highly pleased with, as well as the whole staff of miners. Everything is going on well, and we have not forgotten them whilst putting something in our own pockets, and I hope the shareholders will approve of what we have done in the matter. (Hear, hear.) We have not increased the salary of those two gentlemen, but we have made them a small present. I have nothing more to say except this—We have gone on making various improvements, and all we want is to have lead a better price. When that better price of lead is coming it is impossible to say. I hope with a good harvest in the country, and the revival of the state of trade, with cheap money, there will be a revival of trade in the whole country, and that we shall participate as lead producers, and that before we meet you six months hence we shall have an increase in the price of lead; because every increase of 1s. per ton in the price of pig-lead or lead ore would bring us in an extra 3s. per share a year. A great deal was said at the outset, and from time to time, that the directors gave too much for the undertaking at the time. No such thing. It was a very fair price at the time when lead was up to 22s. per ton, and supposing that we had experienced a continuation of that price we should have paid, I dare say, over £100,000, profit to the shareholders by this time. But if the price of lead goes up now you have to pay 12½ per ton, and you give you an extra 3s. per share in the year, so that if lead ore were to go up only 3s. per ton, we should give something like 9000s. extra profit to the shareholders. (Hear, hear.) Whether that will come to pass in the course of the next 12 or 18 months I cannot say; we can only hope it will be so. (Cheers.) I have now to move that the director's report, the balance-sheet, and Captain Waters' report, be received and adopted. Mr. TUFNELL SOUTHGATE seconded the motion.

Mr. BALDERSON congratulated the shareholders and directors on the success which had attended the working of the company. As regarded the cottage property he was afraid it was not doing much good for the company. He hoped that before long that cottage property would be entirely written off. He asked whether the royalty had been reduced?

The SECRETARY said that the item of the cottages which the proprietor had classed together were distinct items. There were the cottages at the smelt works, represented by five or six cottages, which originally cost £2000, which were worth £2000 now, but, of course, the leases were gradually running off. In every respect they were as good as when the company purchased them.

The CHAIRMAN: And very much better. We have had them done up, and the SECRETARY went on to say that the advance on cottages was the balance of a sum which was advanced at intervals to the miners to build their cottages in the village of Leadhills. The company advanced £400, or £500, having a lien upon the property, which had been reduced, and there was now only 34s. 17s. 11d. outstanding at interest of 5 per cent. It had proved a profitable investment as far as it had gone.

The CHAIRMAN said that at the present time the cottages and cottagers were the picture of cleanliness and comfort. He could only wish that the shareholders would visit the property; they would have one of the pleasant trips they could desire. As regarded the royalties nothing had been done.

A SHAREHOLDER: How long has the present lease to run.—The CHAIRMAN: 13 or 14 years.

The resolution was then put and carried.

The CHAIRMAN: I may mention that Mr. F. R. Wilson has been our secretary ever since the formation of the company, and a short time since he desired that the secretaryship should be placed in the hands of his son, Mr. F. F. Wilson. The directors readily acquiesced in that wish. Everything has been conducted honestly and fairly, and with every attention to the interests of the company by both these gentlemen. We were very sorry to lose the services of Mr. F. R. Wilson, but we were very pleased to place his son in the position of secretary, and I hope the change we have made will meet with your approval. (Hear, hear.)

On the motion of Mr. JOSEPH WHEATLEY, seconded by Mr. BALDERSON, Mr. E. Ashmead, was reappointed auditor.

The CHAIRMAN said he regretted that Mr. Samuel York, one of the directors, was not able to be present, and he had been requested by that gentleman to tender an apology for his absence.

Cordial votes of thanks were then passed to the Chairman, the directors, Mr. Newbigging, and the staff, and the meeting broke up.

ST. JUST UNITED.—At the meeting on Tuesday (Mr. T. S. Bolitho in the chair) the affairs of Mr. R. Boyns, the late purser, were much discussed. It was found that there were 50 shares included in the late purser's 425 belonging to Mr. T. W. Field, and it was decided to notify the trustee in bankruptcy of this fact. A discussion ensued upon a matter of coal, as to whether North Levant owed St. Just United a cargo of coal, of the value of 72s. 3s. This latter item could not satisfactorily be explained.—The Chairman said North Levant evidently owed the 72s. 3s.—Mr. Coulson: They do not admit it.—The Chairman: Very well; we shall have to charge it again.—Capt. Boyns: We cannot settle the point. We have due to lords 27s. I have not received a penny. For instance, if there are more dues than that I shall expect to receive.—Amounts due on calls, received and not accounted for, were then stated to be £22s. 6s. 10d. This said the Chairman, was to be added to the 92s. 15s. 1d., the difference on the merchants' bills, after deducting 200s. out of the 22s. charged that day. It was desirable that it should be clearly stated that the difference due from the late purser of 92s. was explained by the fact that there were bills received for an amount of 200s. He did not know whether the purser had paid the money or not. It was also found that the purser had to account for club and doctors' money, and the bank-book showed a debt to the bankers of 1400s.—The Chairman read the accounts for the 16 weeks. These showed the labour costs to be £2487; the merchants' bills, 574s.; 22s. was charged for coal, of which 25s. appeared in the book, 200s. going in diminution of the claim upon the late purser; making, with other costs, 3390s. On the other side there was tin sold (for 12 weeks only)—66 tons 3 cwt.—3530s., a profit of 14s. 1s. which was reduced by various charges to 94s.—Capt. Boyns said he had received no dues for three years, and he asked for 75s., the minimum rate of dues on the Cape Cornwall property. Dr. Searle also made a claim for 32s.—The Chairman suggested that another meeting be held to settle all claims. He thought there should be a committee, that the managing agent should certify to the correctness of the pay-list, and that one member of the committee and the purser should draw a cheque for the pay as well as for merchants' bills. The meeting, he was of opinion, should be adjourned. They must not be satisfied till they have an accurate balance-sheet. The present purser had had intricate work to deal with. The committee appointed recently to consider the accounts of the mine were desired to continue their duties, and the meeting was adjourned. The Chairman suggested to the purser (Mr. Boyns) that he should have assistance in going through the books. The cost-book did not nearly show their indebtedness of 3257s. Assistance being accepted, the accounts were adopted.

STEEL COMPANY OF SCOTLAND.—At the meeting in Glasgow (Mr. Charles Tennant, M.P., in the chair), the Chairman congratulated the shareholders upon the satisfactory result of the year's business. We have, he said, been enabled to declare a dividend considerably larger than that of any previous year, after writing off 17,000s. from the value of the works, which is about 3000s. more than our depreciation of last year, and placing 5000s. to the credit of the reserve fund, bringing it up to 13,000s. We have, moreover, charged against revenue the cost of considerable improvements made on the works which might legitimately have been added to capital outlay. The prospects of the year on which we have entered are also encouraging. We began with large orders on hand and at good prices, and covered by purchases of raw material at favourable rates. In addition to these orders we have the contract for steel for the construction of the Forth Bridge, amounting to about 35,000 tons, of which only a few hundred tons have yet been delivered. At last annual meeting I called your attention to the total amount deducted from the original cost of the works for depreciation since the commencement of our operations. The sum then named, together with the 17,000s. written off for the past year, brings the present total up to 97,000s., and leaves the value of the works, as stated in the balance-sheet, at such a figure as they could not be replaced for, even at the present low prices of construction. With these remarks I beg to move that the report and abstract relative to balance-sheet shall be, and are hereby, approved of and adopted, and that a dividend of 11 per cent. on the paid-up capital of the company be declared, free of income tax, to be payable—first half Oct. 9, and the other half on April 9 next.

TINCROFT.—At the meeting on Thursday the accounts showed a loss on the 16 weeks' working of 2229s., raising the adverse balance to 9601s.; but from this must be deducted the call made in June last of 10s. per share (3000s., less discount, 2870s.), leaving an adverse balance to be provided for to-day of 6731s. In round numbers the tin had cost about 70s. per ton to raise, and the price realised is about 52s.—a loss of about 18s. per ton. A call of 7s. 6d. per share was made. Capt. Teague remarked that the shareholders would be gratified to learn of the slight improvement in the prospect of the mine. More tin had been sold, and the costs on this part of the mine have been vigorously pushed on since the last meeting, which has incurred a large expenditure. From the reports of independent agents there is now every reason to expect profitable results. The calls made have been well responded to.

WHEEL PEVOR.—At the meeting on Thursday the accounts showed a loss on the four months' working of 2859s. It was explained that the small returns for the meeting was owing chiefly to the breakage of the main rod in the beginning of the quarter, which threw them back a month in their credits; consequently they had to-day only three months' tin against four months' costs. The loss in the new shaft on Great North Downs main lode is already producing black ore of rich quality, and the agents have no doubt they will quickly open up here a valuable property, and again place the mine in a good position. The workings on this part of the mine have been vigorously pushed on since the last meeting, which has incurred a large expenditure. From the reports of independent agents there is now every reason to expect profitable results. The calls made have been well responded to.

LONDON AND GLASGOW ENGINEERING AND IRON SHIPBUILDING.—At the meeting on Thursday (Lord Claud Hamilton in the chair) the Chairman stated that the directors had decided next year to have a general valuation of their buildings, machinery, &c., in order to see whether they might not now safely set aside a smaller sum out of the annual revenues of the company to the depreciation fund. As stated in the report, they had, at June 30, five steamers building of an aggregate tonnage of 10,450 tons, and since then they had entered into further contracts for the building of two more steamers. They could declare a dividend of only 1s. a share, or 4 per cent. In the past four years they had added 9,000s. to the capital account, and thus they were building up the company to a very sound position. In 1879 and the three following years the wages paid by them amounted to much less than the cost of the material, while for 1883 the state of things had been reversed. This fully accounted for their diminished profits, and their inability to make a better return. He thought that the best plan for meeting the arbitrary conduct of the men would be to form a combination of shipbuilders on the Clyde, and he understood that a meeting would be held this autumn to consider the question. He concluded by moving the adoption of the report, which was carried.

NOBEL'S EXPLOSIVES COMPANY.—At the meeting in Glasgow on Wednesday (Mr. A. S. Schaw in the chair), it was explained that the object was to consider certain special resolutions to be submitted regarding the borrowing, upon debenture bonds, of any sums that may be required for the purposes of the company, not exceeding in all the principal sum of 125,000s. Mr. W. H. Thomson (the secretary) read the circular calling the meeting, and the report by the Chairman, in moving the adoption of a series of resolutions conferring the borrowing powers recommended in the directors' report, said that in order to raise the additional working capital which was necessary the directors thought the best course in present circumstances was to issue debentures for limited periods of five and seven years, instead of permanently increasing the capital of the company by the erection of additional shares. The directors were prepared to take 40,000s. of these debentures, unless the applications from the shareholders were greatly in excess of the amount proposed to be offered. He had only further to assure the shareholders that the directors were in a satisfactory and sound condition of mind, with prudent management the directors had every reason to believe they had an excellent and profitable business which would yield good dividends. The resolutions were all unanimously adopted, and the proceedings terminated.

From Mr. JOHN B. REYNOLDS.—There are no particularly encouraging signs to note this week. The markets have not indicated much strength, and investors are still holding aloof. On all sides there is evidence of careful watching, and an unconcealed wish in some quarters for some catastrophe to happen to cause a considerable run down in prices. Holders of good securities, however, remain very tenacious, and hold on to their investments with unconcern; whilst the experienced are so accustomed to panics that it is very questionable indeed if any untoward event should happen on the Continent that we should see a *bona fide* and serious fall in prices. Whatever interested parties may wish, the probability is that quotations will remain as at present for some time, excepting those of speculative securities, such as mines, &c., which may vary according to the prospects of the undertakings involved. We say "may vary," because at the time we write discoveries in mines do not materially affect the markets. Two or three of our Cornish mines are improving rapidly, but the prices of the shares do not rise to any appreciable extent. For instance, West Kitty never looked richer than it does now, yet the shares, instead of being at 15s. to 16s. as they were not long ago, are no higher than 14s. each. True the market for them is strong, but the illustration holds good notwithstanding. A discovery has also been officially announced at Trevaunance; certainly one of the most important which has taken place in Cornwall for some years, as it is likely to lead to the opening up of another rich deposit of tin in that property. The shares here, although greatly strengthened, have not shown any substantial advance. It is important, of course, to watch what the prices of the shares may happen to be, especially at a period like the present, when there is little or nothing doing. The progress of mines will tell, and must tell in the not far distant future, for the time is coming when the public will become only too keenly alive to such important facts as those alluded to. In the meantime it is satisfactory to know that dividends will be kept up, and indeed more than sustained in consequence of the very steady, and we may add, satisfactory state of the tin market.

The public will do well to recollect that the history of the past proves most undoubtedly that the periods through which we are now passing are not new to those who have been engaged in commercial life for many years, and it must be admitted, as we have reminded your readers in former articles, that such periods are always followed by seasons of excitement. The activity will begin, not by a feeble impulse for lowered shares, but by a *bona fide* demand for the public for first-class stocks and shares. That this demand has not yet commenced it is our painful duty to admit, for it has been obvious that, notwithstanding the firmness which characterises the markets for a few excel-

lent securities it immediately gives way when any selling orders of importance are pressed. It is clear that the interests of all those who wish for a return of activity lie in the direction of helping forward legitimate and honest enterprise. As we reminded our readers last week it is not unlikely that new projects will be introduced in consequence of the large quantity of capital for which at present there seems to be literally no employment. Some of these projects will, no doubt, do credit to commercial enterprise, and give profit to those who may be connected with them. On the other hand, if the public rush after every new scheme that is started without carefully weighing the merits of a period of activity, such as we look for, will leave no cause hereafter for congratulation. It must not be forgotten that the present stagnation is in some measure due to the frauds which have been palmed off on the British public. It may be doubted whether the promoters of these dubious schemes have themselves received any permanent benefit; but, be that as it may, we may rest assured that it is in the interests of everybody to promote that only which affords fair chances of being remunerative to all.

ANDERTON TIN.—Shares are in demand. We understand the progress in forking the mine is good. There is a firm shaft not requiring timber, and the 20 will be reached by the end of the present week. The prospects are very bright and encouraging; and the shares are quoted 1½ to 1¾.

FOWEY CONSOLS.—Hall's lode, to which attention has before been drawn, continues to improve rapidly. The result of the crushing on Friday and Saturday last gave an average of 85 lbs. of tin to the ton, and some samples taken from the west end of the lode and assayed by Capt. Penhale, of East Pool, showed 1 cwt. 1 qr. 38 lbs. per ton. Facts like these speak for themselves. The present owners state that their only reason for parting with any portion of this mine is that its supervision and management will interfere with their regular business, so that they were moderate in the value they have placed upon it: 8000s. will not be considered excessive, considering it is a going concern, with all the machinery necessary for 15 or 20 tons of tin per month. The mine is to be divided into 8000 shares, of 22s. each (a very different thing to a limited company with a large capital). The vendors are to receive 4000s. and 4000 shares, and the remaining 4000 shares are to be offered to the public. The big new lode to the north of Hall's lode, which Capt. Josiah Thomas, of Dolcoath, judging from the back of it, believes to be a "champion" lode, may be cut at any moment.

GLASGOW CARADON.—The directors in a circular to the shareholders, after stating what work has been done, point out that the result has been a gradual yet satisfactory increase in the output of ore, but that owing to the lower price of copper the value realised is actually less, 594 tons bringing 2924s. 8s. 1d. in 1882, while 678 tons have only fetched 2797s. 19s. 2d. this year so far. These reduced drawings operate against certain necessary works being prosecuted, and the directors are so satisfied that nothing but advantage can arise from these being pushed forward that they propose to issue 4000s. Preference shares, carrying a cumulative dividend. But as they think it not improbable that they may within a reasonably short time be in a position to pay off the new shares, power will be taken to redeem them within five years, at a premium of 5 per cent. over and above the premium that may accrue. At the meeting on Thursday it was resolved.

CORNISH LANGUAGE.—An interesting paper "On the Relics of the Cornish Language" has been reprinted from the Journal of the Royal Institution of Cornwall. Mr. Lach-Szyrna estimates the number of words which have actually survived as being about 200, most of which live on mixed up with their English neighbours of the existing Cornish dialect. In his list of evidences concerning the language of the Celtic inhabitants of Britain, Mr. Lach-Szyrna does not include the place-names of Clydesdale, which nevertheless certainly deserve study as being among the most enduring traces of the kingdom of the Strathclyde Britons. There are yet some Cornish MSS. remaining unpublished; and Notes and Queries asks:—Would it not be a work worthy of the Royal Institution of Cornwall to publish them?

TRUBNER'S LITERARY RECORD.—The current month's issue of Trübner's American, European, and Oriental Literary Record contains an interesting notice of Dr. G. W. Leitner's History of Indigenous Education in the Punjab since Annexation and in 1882; Mr. Clements R. Markham's Reply to a Criticism of the Quichua Drama of Ollantay, by General Mitre; and a large amount of general literary intelligence, in addition to the usual lists of new books and new editions.

CASSELL'S PUBLICATIONS.—Archdeacon Farrar's Life and Work of St. Paul, part 21, contains the continuation of the chapter on the last journey to Jerusalem. Knight's Practical Dictionary of Mechanics, part 82, extends from Tool-car to Trepine.

Murray's Complete London Time-Tables, Diary, and Suburban Railway Guide for October have just been issued. They are exceedingly compact, the tables for each line being contained in a book 4 by 2½ in., and much less than 1-16th in. thick, so that nothing could be more convenient for carrying in the vest pocket.

ROCK DRILL JOURNAL.—The revised edition of the first number of this journal has been issued. Some trifling modifications have been introduced, but the general character of the sheet remains unchanged. It is precisely such a journal as an inventor might be expected to produce, and it is cordially to be hoped that it will prove equally remunerative to the proprietor and the printer.

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BRITISH MINES.

ANDERTON TIN.—W. J. Bowley, Oct. 3: I am glad to say our works are all making good progress. We have finished clearing up flat at the 10 ft. level in Murray's shaft, and are now sending down pumps to fork to the 20 ft. level, and as our engine makes light work of the water in the shaft we hope to reach this point by the end of the week. All our dividing timbers, ladders, and solars are in place for 13 fms. below adit, and the shaft is firm, and in capital condition. On reaching the 20 we propose to drive a cross-cut to get to the west of the cross-course under the fine course of tin gone down in the winze above. All is well forward, and I do not see any cause likely to delay us beyond this week in forking to the 20. There is a fine lode in Murray's shaft at the 10 ft. level. The stope in the adit is looking as before reported, and yielding good tinny work, improving in the bottom going down, and the men are making good progress driving the end west. The stamps are working full time, and the water in the new launder to the wheel comes home well, so that we shall no longer need to cross the meadow. Shall give full particulars of our progress next week.

BEDFORD UNITED.—H. Trease, Oct. 2: I beg to hand you my setting report for eight weeks ending Nov. 24. A bargain of lode to strip and take down in the 115 east, per contract 84 by two men. The 115 west to drive by two men, at 84. 10s. per fathom; lode in the present end unproductive. The 103 west to drive by two men, at 84. per fathom; lode in the present end is improved in size and appearance, worth 44. per fathom. Seven tribute pitches set at tributes varying from 11s. to 15s. in 14. McCallan's shaft to sink by nine men, 13 fms. contract, at 177. per fathom. The 62 to drive east to hole to a winze sinking below the 42 by six men, at 51. 10s. per fathom; lode in the present end is worth 51. per fathom. The 62 west to drive by six men, at 44. per fathom; lode producing saving work for ore and muddle. The 62 east to drive by four men, at 74. per fathom; lode worth 51. per fathom. No. 1 stope in back of the 42 by two men, at 14. 10s.; lode worth 102. per fathom. No. 2 stope in back at 24. per fathom; lode worth 84. The 30 east to drive by two men, at 51. 10s. per fathom; lode looking promising for an improvement. The stope in the bottom of the 30 east by four men, at 24. 15s.; lode worth 124. The winze sinking below the 42 west is within 5 fms. of the 62. The 5 fms. of not spent ground between the bottom of the winze and the 62 west we intend to rise in, being the cheapest way of opening the ground. —P. S.—We have sampled 120 tons of copper ore, 45 tons from the Bridge lode, and 35 tons from the north lode.

BLUE HILLS.—S. Bennett, R. Harris, H. Gripe, Oct. 3: The Pink lode in the 65 east end is 1 1/2 ft. wide, and worth 64. per fathom. The Baldu lode in the 54 west end has not changed much during the past week. In the 42 east end the ground is again becoming soft, and the lode became unsettled and unproductive. In the 20 east end on the south section the lode is yielding some little tin stuff, but not sufficient to value. The pitches are without much alteration worthy of notice.

BWLOH UNITED.—W. Northey, Oct. 4: There is no change taken place in the character or appearance of the lode at the 100 since the date of my last advice. The machinery is in good working order.

CARN CAMBORNE.—W. C. Vivian, Oct. 4: In the 105 cross-cut, towards the south lode, our progress is much the same as it has been. As we have suspended the driving of the 95 east, on the south lode, *pro tem.*, as this lode will be developed much more economically and effectually on being intersected at the 105. The rise in the back of the 95, west of sump, is yielding about 2 tons of copper ore per fathom. In cutting through the north lode in the 40, west of engine cross-cut, we are meeting with strong yellow copper ore.

CARNARVONSHIRE GREAT CONSOLS.—W. H. Borlase, Oct. 4: I am pleased to inform you that the lode in the 36, east of new shaft, is improving daily. We are carrying the end 4 ft. wide, the whole of which is stringed up with small branches of lead, producing good saving work for dressing floors. The appearance of the lode to-day is very promising, and I am hopeful of having a good ore lode in a short distance ahead of the present forefront.

CATHEDRAL CONSOLS.—Stephen Davey, S. Davey, jun., Oct. 4: The lode in the engine shaft, sinking below the 74, is disordered by a cross course, on the eastern side of which the lode is heaved about 1 1/2 ft. to the north. The lode in the 74, driving east of shaft, is 2 ft. wide, and worth for tin 74. per fathom; a very promising-looking lode. We have suspended the driving of the 62 east for the present. There is no change to report in the winze east of Lawry's shaft.

COLLACOMBE CONSOLS.—Oct. 5: The following is a copy of the telegram received from the manager of Collacombe Consols to-day:—W. Skeels to S. James: Collacombe dressing machinery went to work yesterday. Pitches and stope through mine looking much the same. Full report next week.

CWMYRTHYTH.—Joseph B. Rouse, Oct. 3: The railroad in Gill's upper level has been completed to the end, and the level set to drive by four men. The lode in the end is 2 ft. wide, composed of a good mixture of lead and blende, saving work for the dressing floors. We anticipate an early improvement in this level, as there is a good lode going up a few fathoms in advance of the end. The lode at this point, as we before intimated, is intact to surface a height of about 80 fms. The stope over Gill's lower level is yielding 12 cwt. of lead and 1 1/2 tons of blende per fathom. We have whole ground for 20 fms. high over this stope. Our pitches on the whole are yielding about the same as when last reported on. We have an abundant supply of water for all purposes, with our ponds full. Our machinery is in full work and in fair order. We sent out samples yesterday of 23 tons of lead ore for sale on the 16th inst.

CWM DUYFOR AND BRYNARIAN (Brynarian Mine).—J. Davies, Oct. 4: We are pushing on with boundary cross-cut as fast as we can. We have very firm ground to go through, but water is issuing freely from the end.

D'ERREBY MOUNTAIN.—J. Roberts, W. Sander, Oct. 3: The middle of the stope in the roof of No. 5 intermediate is not looking quite so well as it has been, but we cannot regard it as of importance, as we have reason to believe that it is only temporary. The ends of the stope are of just the same value as we have reported them before. We have made no further discovery at No. 4. The end of the stope appears to be of just the same value going down as it is on the

top. This stope is 4 or 5 fms. long, and we have to clear the whole, which makes it more spare than we had only an ordinary sump. We have put in a stull over head, so as to secure the men in going below.

DEVON FRIENDSHIP.—F. R. Daw, W. Gill, Oct. 4: The 42 end, east of Bennett's engine-shaft, continues poor, but the ground is a little more favourable for driving. The 42 end, west of this shaft, is worth 84. per fathom for arsenical muddle and 34. per fathom for tin ore. The stope in the back of this level is worth 102. per fathom for arsenical muddle and 34. 5s. per fathom for tin ore. Richard's stope, in the back of the 30, west of Bennett's shaft, is worth 94. per fathom for copper ore. Floyd's stope, in the back of this level, is worth 74. per fathom for arsenical muddle and 24. per fathom for tin ore. The winze in the bottom of this level is worth 104. per fathom for arsenical muddle and 24. 10s. per fathom for tin ore. The stope west of Ladder winze, east of Bennett's engine-shaft, is worth 84. per fathom for arsenical muddle and 24. 10s. per fathom for tin ore. All surface work progressing satisfactorily.

DEVON GREAT CONSOLS.—Isaac Richards, Oct. 4: Monthly Report: Wheel Josiah: During the past month the Count House shaft has been sunk 1 fm. 0 ft. 8 in., the lode proving from 3 to 3 1/2 ft. wide, composed of capel, quartz, muddle, and a little copper ore.—Wheel Emma, Inclined Shaft: In Glanfield's rise, in back of 137, east lode has been opened on 3 fms. 1 ft. 3 in., proving 4 ft. wide, and yielding 3 tons of copper ore and 3 tons of muddle per fathom.—New Shaft, New South Lode: The 205 east has been driven 2 fms. 4 ft., the lode proving from 3 to 5 ft. wide, of a promising character, and yielding a little copper ore, and for the greater part of the distance 1, 2, and 3 tons of muddle per fathom for arsenical muddle. The stope in the south part of the lode, has been driven 1 fm. 1 ft. 4 in., the lode part carried 4 ft. wide, being composed of very strong capel and quartz, with muddle and a little copper ore. This drive is for the time suspended to admit of a plat being cut preparatory to deeper sinking of this (the Railway) shaft, and it is fully anticipated that discoveries of copper and tin ores will be made as depth is attained. South-comb's winze in the bottom of the 190 west, on the south part of the lode, has been sunk 5 fms. 7 ft., the lode proving from 5 to 6 ft. wide, of a strong muddle character, and yielding small quantities of copper and muddle ores. The 160 west, on the south part of the lode, has been driven 4 fms. 2 ft. 8 in.; for a great part of this distance the lode was disordered by a small disjuncture; it has now, however, become more settled, and it is of good size (3 ft. wide), yielding good stones of copper and muddle ores, and judging from its general appearance, an early improvement may be expected.—Watson's: The engine-shaft has been sunk 1 fm. 4 ft. 6 in., making the total depth below the 100, 5 fms. 0 ft. 5 in., the lode proving from 3 to 4 ft. wide, of an exceedingly promising character, and yielding some good saving work for copper and arsenical ores. The 109, west of the engine-shaft, has been driven 1 fm. 4 ft. 4 in., the lode proving from 3 to 4 ft. wide, of a promising character, and yielding some stones of copper and muddle ores. The 32 has been driven east of the western shaft 2 fms. 2 ft., and west 2 fms. 2 ft. 3 in., the lode proving from 1 to 2 ft. wide, composed principally of capel and quartz. The 20, east of the western shaft, has been driven 1 fm. 4 ft. 9 in., the lode proving 2 ft. wide, composed of capel and quartz, with peach, muddle, and a little copper ore. This drive is at present suspended to admit of a rise being put up in the back of this level, where the lode is 3 ft. wide, and worth 1 ton of copper ore and 2 tons of muddle per fathom.

DEVON GREAT UNITED.—Isaac Richards, Oct. 4: In the 120, east of Willesford's shaft, the lode—2 1/2 ft. wide—continues of a very promising character, and is yielding 2 1/2 tons of copper ore, worth 104. per fathom. In the 120, west of Willesford's shaft, the lode maintains its size, 4 ft. wide, and is still yielding 4 tons of copper ore, worth 164. per fathom. In the cross-cut north in the 61, west of Watson's shaft, on the middle lode, the ground is of a very congenial character for the production of mineral, and is tolerably favourable for progress.

DIKESWALLS UNITED.—Moses Bawden, Oct. 4: We have secured the plan of the 93, and the lode is very large, and has not been cut through in a very large accumulation of rubbish, which must be cleared before we can proceed with the draining of the mine to the 102 or bottom level; and to do this the new skip-road must be extended from the deep adit level and the shaft secured. This will take us at least four weeks, but in the meantime we shall have the benefit for drawing of tin stuff of the skip-road, which we are now placing in Mathew's shaft, and which we shall complete to the 80 by end of next week. We have cut open the shallow adit level, west of engine-shaft, and laid tramroad road about below it, as the lode is very large, and has not been cut through in this part of the mine either at the 24 or 44, and we see no reason why it should not be found equally productive at those points when fully proved. The winze below the 56 is holed to the rise above the 66, which has laid open for stopping the large and profitable section of ore ground standing between these levels, and as the winze came down on or near the north side of the lode, and the 66, from which the rise was commenced, is towards the south side, this communication has proved the lode to be very wide and productive throughout as we anticipated. The other shafts, which are numerous to refer to in detail, fully maintain the value and output of ores, and on the whole the mine is looking quite as well as it has been for a long time past. Since our last report we have sold 250 tons of blende, and are now preparing other parcels of lead and blende ores, which will be sold during the coming month.

EAST BLUE HILLS.—S. Bennett, W. K. Mitchell, Oct. 3: The eastern shaft is cleared and enlarged to nearly the bottom of the perpendicular, and the point of intersection of the lode some 18 fathoms below the surface. The rises towards this shaft are without much alteration. The stope in the back of the adit is worth 74. per fathom.

EAST DARRIN.—T. Garland, Oct. 3: In the 92 end west we are cross-cutting north, in ground chiefly composed of beds of grit, hard for exploring. In the 80, west of stope, the end is all in lode, yielding branches of lead ore, worth 1 1/2 tons per fathom. In the stope over the 92 and 80 the lode varies from 3 ft. to 6 ft. wide, yielding on an average 1 ton of lead ore per fathom. We have an abundant supply of water for drawing and dressing, which are being pushed forward, and we sampled yesterday (Tuesday) 28 tons of silver-lead ore for sale on the 16th inst.

EAST UNY.—Wm. Hooper, Oct. 4: The lode in the 92 west on Davis' lode is 3 ft. wide, producing some good stones of copper ore; a promising looking lode. In the rise in the back of the 82 on Davis' lode the lode is from 2 to 3 ft. wide; worth 1 ton of copper ore per fathom. No. 1 stope in the back of the 82 on Davis' lode is worth 2 tons of copper ore per fathom. No. 2 stope is worth 1 1/2 tons of copper ore per fathom. No. 3 stope is worth 1 1/2 tons of copper ore per fathom. I have set a pair of men to drive the cross-cut north of Davis' lode at the 60 fm. level to intersect the Great Flat lode. We have working nine tribute pitches, varying from 5s. to 13s. 4d. in the 14. No particular change in any other part of the mine.

FRONGOCH.—J. Kitto and Son, Sept. 29: Soon after the date of our last monthly report we put a set of men to cut out the side of the old level at the 34, east of Llynwnoch shaft, and it is pleasing to state that in so doing we have discovered the ore-bearing part of the lode, which as far as yet seen yields fully 2 1/2 tons of blende and 15 cwt. of lead ore per fm., and shows the most promising indications for continuance, inasmuch that there is a good prospect of opening out ore ground of considerable value and importance, not only at this level but also below it, as the lode is very large, and has not been cut through in this part of the mine either at the 24 or 44, and we see no reason why it should not be found equally productive at those points when fully proved. The winze below the 56 is holed to the rise above the 66, which has laid open for stopping the large and profitable section of ore ground standing between these levels, and as the winze came down on or near the north side of the lode, and the 66, from which the rise was commenced, is towards the south side, this communication has proved the lode to be very wide and productive throughout as we anticipated. The other shafts, which are numerous to refer to in detail, fully maintain the value and output of ores, and on the whole the mine is looking quite as well as it has been for a long time past. Since our last report we have sold 250 tons of blende, and are now preparing other parcels of lead and blende ores, which will be sold during the coming month.

GAWTON.—G. Rowe, Sept. 29: The lode in the 117 east is laid open 19 ft. wide, and so far seen it is principally capel, spar, and arsenical muddle, mixed with sulphur, and yielding fine stones of yellow copper ore. The lode in No. 1 stope in the back of the 117 east is yielding 7 tons of copper ore and muddle per fathom. The lode in No. 2 stope in the back of the 117 east is yielding 7 tons of arsenical muddle per fathom. The stope, east of rise, in the back of the 117, is yielding 3 tons of arsenical muddle per fathom. The lode in the stope between east and west of winze in the bottom of the 105 is yielding 6 and 9 tons of muddle per fathom. The stope in the back of this level is yielding 10 tons of muddle with a little ore per fathom. The lode in the bottom of the 82, west of cross-cut, is yielding 7 tons of arsenical and sulphur muddle per fathom. The stope in the back of the 70 east is yielding 8 tons of muddle.

GODDARD.—R. H. Egan, Oct. 4: I am glad to inform you that since last week we have been driving a large piece of the hanging-wall of the lode, where we find strings of lead ore mixed with blende. The lode seems to be forming large again, and of a most kindly nature, mixed up with lead and blende.

GOGINAN.—J. Kitto and Son, Sept. 29: We are pleased to be able to state that the favourable anticipations expressed in our last report have thus far been realised. We have made good progress in driving 70 west of Francis's shaft; the lode at that point has been yielding ore in paying quantities from that time to the present, and during the past month having varied in value from 10 to 25 cwt. of silver-lead ore per fathom, and the present forefront is still in good ore ground. After driving a little further we shall commence a rise from the roof this level to effect a communication with the 60, which will ventilate this part of the mine, and open out a valuable piece of ground, from which we hope to make a good return of silver-lead ore. Our other operations are going on as usual, and present no change worthy of remark.

GREAT HOLWAY.—W. T. Harris, Oct. 4: Rosell's Shaft: The 95 north has been extended 3 fms. 3 ft.; the lode, which is 2 ft. wide, is of good quality; the present end gives great encouragement that the intersection will be accompanied with profitable results; reset to six men, at 84. per fm. In this level south the stope in the roof has yielded a little lead, and is a fair trial. The 80 west has been extended 1 fathom; the lode is 1 ft. wide, containing a good mixture of blende. The drawing of water from the winze sunk some distance in advance of the forefront has been accomplished, but nothing of intrinsic value has been found, and further operations for the present have been discontinued. The men—six in number—are now employed stopping the bottom of the level, to give a better flow for the water from the east level; set to twelve men, at 40s. per fm. —Brannock Shaft: The 6 east has been extended 2 fms. 4 ft.; the lode is small, but prospects much in favour for a continuance of this point. The beds are dipping in an easterly direction, and much easier ground may be expected as the level advances.—Office Shaft: In the 80 west the cross-cut south has been driven 2 fms. 2 ft. 6 in.; the ground is hard for progress; the intersection cannot now be far off. Branches of spar traverse the forefront, and the dip of the strata indicates an early change; set to four men, at 122. per fm.—Level Engine Shaft: The 80 east has been driven 3 fms. 6 in.; the lode is 1 1/2 ft. wide, principally blende of good quality. Water issues in increased quantity, and the ground improved for progress. The men—six in number—have been removed to assist in stopping the bottom of this level, as above reported. In the stope in the back of this level the lode is 2 ft. wide, yielding 10 cwt. of lead and 1 ton of blende per fm.; set to four men, at 64. 10s. per fm. The 60, east of No. 4, has been extended 3 fms. 1 ft.; the lode is 1 ft. wide, producing lead in paying quantities; reset to four men, at 84. per fm., and 40s. per ton. The 50, west of the 60, continues to yield lead as for some time past, worth 4 1/2 tons per fathom, and blende 2 tons per fathom; set to twelve men, at 14. 5s. and 30s. per ton respectively. No. 2 pitch, in back of this level, is worth 3 tons of lead and 2 tons of blende per fathom; set to twelve men, at 34. and 40s. per ton respectively. No. 3 pitch, in back, is yielding fair quantities of lead and blende; set to four men, at 64. per ton the first, and 40s. per ton the latter. No. 9 pitch, in bottom of this level, is worth 8 cwt. of lead and 1 1/2 tons of blende per fathom; set to six men, at 74. per ton and 40s. per ton respectively. No. 5 pitch is producing 1 ton of lead and 2 tons of blende per fm.; set to six men, at 80s. and 25s. per ton respectively. No. 10 pitch is worth 1 ton of lead and 1 ton of blende per fathom; set to six men, at 100s. per ton the first and 40s. per ton the latter. Machinery in good condition, and working well. Dressing and surface work progressing as for some time past.—Sales: No. 1 parcel of lead (25 tons 10 cwt.) realised 242s. 17s. 9d. No. 2 parcel (34 tons) realised 318s. 15s. Blende, No. 1

parcel (37 tons 10 cwt.), realised 143s. 8s. 9d. No. 2 parcel (20 tons) realised 80s. No. 3 parcel (computed), say, 85s.

GREEN HURTH.—Jas. Polglase, Sept. 27: The 44 end north is improving, worth 2 tons of ore per fathom. We naturally expect a richer vein in a fathom or two, judging from the level above. In No. 1 stope, south from No. 1 winze, the 44 is worth 2 tons per fm. No. 2 stope from No. 1 winze is worth 6 tons per fm. No. 3 stope, north of No. 1 winze, is worth 5 tons per fm. The rise in back of 44, south of Swan shaft, is holed; this will open another good stope, and will enable us to drive the 44 end south. The stope in the back of the Swan level is worth 6 tons per fm. The men in the east level from Standage are now driving north on what we think is No. 2 vein. Rise in back of 30 is without change. The wheel is doing good duty, keeping the water easily. Dressing going on as usual.

GREAT WEST CHIVERTON.—John Curtis, Oct. 2: In the 62 west the lode is split, each part producing lead and letting out more water. There is no other change to notice in the mine since my last report.

GUNSLAKE (CLITHER).—John O. Secombe, Chas. W. Secombe, Oct. 3: The lode in the 236 east is 4 ft. wide, composed of spar, peach, and occasional stones of copper ore, but not enough to value. In this level west the lode is looking more promising than for some time past, and ought soon to be productive. The lode in the 224 west is poor. The lode in the 212 east is also poor. In this level west the lode is worth 74. per fathom. The lode in the 200, both east and west is unproductive at present. The lode in the 188 east is worth 35s. per fathom; a very fine looking lode. In this level west the lode is producing saving work for copper ore. The rise in the back of this level is worth 64. per fm. In the 176 west we consider we are through the piece of disordered ground, and have put the men to drive south, as we think there is a better part of the lode standing in that direction. The lode in the 164 east is worth 64. per fathom. The lode in rise in back of this level is worth 74. per fathom. The stope and pitches throughout the mine continue to yield about the usual quantity of copper ore. —Crease's South Lode: There is no change to notice; the men are making fair progress in driving. We sampled on Friday last 176 tons of copper ore of about the usual quantity.

HEALEYFIELD.—Jno. Trelease, Sept. 28: I am pleased to inform you that better progress has been made in the sinking of Whitwell shaft this last week. We have met with some good samples of lead ore in the last fathom of sinking which come from a west string that is now crossing the shaft. There is no particular change in the mine to make note of this week. The rise in the back of Success level is now more sparry than it has been with spots of lead intermixed throughout the vein, but not sufficient to value. We are not through the large run yet at the Derwent level. It is crushed altogether at the 175, and so far as yet seen it is a fine looking ore, 60 in. wide, and yielding silver-lead ore of excellent quality, and worth full 10 cwt. per fathom. We have commenced to sink a winze on its course, where intersected to communicate with the rise over the 190 as soon as possible for ventilation, &c.; when this is done we shall open on its course north and south. The lode in the rise and stope is still worth from 18 to 20 cwt. of silver-lead ore per fathom. All other points of operation throughout the mine are without much alteration since last reported. Will send a further report of the new lode next week.

HINGSTON DOWN.—T. Richards, Oct. 3: The 52 cross-cut has been driven during the past week 5 ft.; from present indications it would appear that the lode is not far off, and lately some capel has been met with containing some spots of yellow copper ore. The 40 east has been driven 3 ft.—total distance from the shaft 25 fathoms; the lode is composed of capel, quartz, arsenical muddle, peach, priam, &c., and occasional good stones of copper ore.

HOLWAY CONSOLS.—Oct. 4: Eytton's Engine-Shaft: The clearing and securing of the 100 north is now complete, and much improved, and ventilation secured for the deeper workings throughout the mine. The 128 north has been extended 3 fms. 3 ft., the lode yielding good stones of lead, and much improved in character; a further improvement here is beyond doubt as progress is made. Set to six men, at 74. per fathom. At the 110 north a winze is being sunk to communicate with the level below, and open up stopping ground, which is favourable for progress. Set to six men, at 54. 10s. per fathom. The stope in the bottom of this level continues to yield lead in paying quantities. At present there are six men, six in number, are employed driving a cross-cut to Belles' pitch for ventilation and convenience, and in a few days will resume the stope. Tribute pitch in the bottom of the 100 yields splendid stuff for the dressing floors, and is promising for a continuance. Set to six men, at 54. per ton. No. 2 pitch two men, at 64. per ton.—Partridge Shaft: The 35 north has been extended 4 fms. 3 ft. Ground as last reported. The men are now cross-cutting west to the winze sunk from the level above for ventilation. Set to six men, at 34. per fathom. The pitch in back of this level south is worth 1 ton of lead per fathom. Set to four men, at 64. per ton. In the 90 east the lode is 2 ft. wide, worth 1 1/2 tons of lead per fathom, and extended 2 fms. 3 ft. Set to six men, at 94. per fathom, and 40s. per ton lead. Stope in back of this level is worth 1 1/2 tons of lead ore per fathom, and set to six men, at 34. per fathom, and 40s. per ton for lead. The lode in the pitch in back of this level is yielding 1 ton of lead ore and 10 cwt. of blende per fathom. Set to six men, at 64. per ton lead and 40s. per ton blende. Machinery in sound condition and working satisfactorily. Dressing and surface work making usual progress.—Sales: No. 1 parcel, lead, 4 tons 15 cwt., realised 424s. 14s. 3d.; No. 2 parcel, lead, 15 tons, realised 135s.; blende, 2 tons 10 cwt., realised 94s. 11s. 3d.

KIT HILL GREAT CONSOLS.—Isaac Richards, Oct. 4: At the Tunnel level the ground has slightly improved, and the distance driven during the past week is 2 fms. The casing and dividing of the north shaft between the 75 and 88 is in a forward state of completion, and the cutting of ground for trip-pit at the 88 is proceeding satisfactorily.—North Shaft: In the 75 west the lode is 3 ft. wide, composed of capel and quartz, with wolfram, muddle, &c., and a little copper ore; the distance driven during the past week is 1 fm. 3 ft. In the 75 east the lode is 3 ft. wide, composed of capel, quartz, and muddle, and good stones of copper ore. In the 62 east the lode is 2 1/2 ft. wide, composed of capel and quartz, with gossan, muddle, and a little tin ore; the distance driven during the past week is 5 ft.

LANGFORD.—Thomas Gregory, Oct. 4: We have commenced stoping from the winze at the 20, east of engine-shaft, in a lode from 2 to 2 1/2 ft. wide, producing good silver-lead, copper, and blende, intermixed with gossan. We shall draw a pile of ore from this place in the course of a few days. We shall go on with clearing the level, and we hope to set on some tributaries in a very short time on this lode. The 30, west of engine-shaft, ought to be cleared forthwith, and the lode thoroughly examined in the bottom of that level. Much ore ground has been taken away in the shallow workings, therefore those points should be proved. The engine and pitwork are working well.

MELLANEAR.—J. Gilbert, Oct. 3: There is no change worthy of notice in any part of the mine since last week's report. Saturday next being our monthly setting-day a detailed report will then be sent you.

MID-DEVON COPPER.—James Neill, Sept. 23: A Shaft: Water in fork to bottom of 50.—C Shaft: The cross-cut north from extreme end of 50 east, worked six men and three boys with rock-drill, has advanced 8 ft. 6 in.; the stope is intermixed with more chlorite and hornblende and surrounded by a fine granitic garnet which at present is interperated with yellow ore and arsenical muddle. These indications should result in larger deposits of ore being met with. The stope in back and side of 50, worked by two men, has improved in the yield of ore a little, it is now being met with in paying quantities. Surface work progressing satisfactorily.

NEW CARADON.—N. Richards, Oct. 6: The shaftmen have secured the adit level, and the engine-shaft to this point, and are now engaged in timbering below the same. The masons are doing fine progress in building the frame for water-wheel, which we hope to get completed should the weather prove favourable in about three weeks from this date.

NEW TERRAS.—J. D. Fraser, T. Edwards, Oct. 4: We have been very busy during the past week in bringing on to the mine all the machinery recently purchased. The shaftmen are making fair progress in fixing pumping gear in the engine-shaft. We are also engaged in fixing the stamping-engine, and good progress is being made in the erection of the dressing floors. The lode in the lobby shaft is 1 1/2 ft. wide, and is rich in tin.

NEW TRUMPET CONSOLS.—R. Quantrell and Son, Oct. 4: Wheel Vails Lode: There is no particular change in the 23 driving west since the last report. The lode in the 16 west is now worth 104. per fathom for copper ore. The lode in the winze sinking below this level is worth 154. per fathom, and appears to be going down in a good run of ore ground. We have drawn to surface another pile of good copper ore, and our prospects are very favourable.

NEW VAN CONSOLS AND GLYN.—H. B. Vercoe, D. Douglas, Oct. 3: Monthly Report: In the 50, east of Murray's shaft, the drive on the north part of the lode, towards the Van Mine, progresses favourably; during the month the level has been extended about 7 fms. The character of the lode has changed; it now contains more quartz, and, taken altogether, is far more promising for the production of lead than it has been at any point to the east of the shaft. Prospects at this end of the mine very encouraging; and, judging from the indications, we have every right to expect a discovery of ore at no distant date. The fan machine has been fixed and got to work; the air is now good, and the men are, consequently, able to do a larger amount of work. In the 50, west of Quarry's shaft, about 8 fms. have been driven during the past month, on the north part of the lode. We purpose continuing this drive west for another month, then to cross-cut south through the lode to ascertain its width in value. This cross-cut should show us something good; and, as it will be fully 20 fathoms in advance of the last one made, and nearer to the point where the ore was found in shallower workings, we look forward to the result with great interest, believing, as we always have done, that a rich body of ore must exist in this end of the property. No. 1 stope, in the roof of the 109, west of Murray's shaft, has not been so productive for the last few days formerly; this week, however, it has again improved, and will yield 15 cwt. of lead per cubic fathom. No. 2 stope, in the roof of the 40, west of Murray's shaft, produces 13 cwt. of lead per cubic fathom. A stope in the roof of the 50, west of Murray's shaft, produces 8 cwt. of lead per cubic fathom. We have about completed the stable at the Glyn Mine, and shall have the horses kept at the mines after this week; this, we expect, will effect a saving as well as being much more convenient. The dressing towards the next sampling progresses fairly well, and the slime department turns out quite equal to our expectations, and will gradually be extended, and an increased profit be derived therefrom. We shall sample on Friday, Oct. 12, 25 tons of lead ore of good quality, for sale on Thursday, Oct. 13.

NORTH BLUE HILLS.—S. Bennett, Oct. 3: The lode in the 14 east end is from 1 to 1 1/2 ft. wide, containing small quantities of muddle and blende, with some occasional spots of copper ore. Two men are employed in opening out a little further on the junction of the north underlying lode with the south lode in the west end in the adit level.

NORTH GREEN HURTH.—James Polglase, Sept. 27: The vein in the deep adit level is intersected by branches, but no improvement has taken place. We purpose on setting-day to put the men to drive the deep level cross-cut. Now the air-shaft is holed on the south level from deep adit the driving south on the course of the vein is resumed, the vein is rather improved in appearance. No change in the new property.

NORTH PENSTRUTHAL.—Stephen Davey, Wm. Folkinghorne, Oct. 4: We have commenced sinking Highburrow shaft below the 150, which is being pushed on with all possible dispatch. The lode in the 150, driving

engine-shaft for tin, at 157 and 177 per fathom respectively. The timber around the engine-shaft was decayed badly, and in order to prevent serious leakage the men are now engaged in newly collaring this shaft. The carpenters are progressing favourably with the erection of the air-compressor house; likewise the masons in building walls for ironyard, &c. Since intersecting these tin lodes at this comparatively shallow depth well-known authorities speak highly of the value of this part of the property, and we strongly advise continuing the deep adit cross-cut north to intersect other lodes which we have before referred to. Since our last report we have broken some splendid stones of tin at cross-cut, which makes us the more anxious to extend operations.

OKEL TOR.—H. Bulford, J. Rodda, Oct. 4: The new shaft east is down 7 fms. 4 ft. 6 in. below the 80, and is set to sink to nine men, at 211 per fathom. The lode in the bottom of the shaft still continues to look well for tin. The 80 end east is set to drive to four men, at 84. 10s. per fathom, and the lode producing good tin work. We have started a winze in the bottom of the 80; set to four men, at 104. 10s. per fathom, and the lode is looking well both for arsenic and tin. No. 1 stope in the back of the 80 is set to four men, at 34. 10s. per fathom; lode producing 5 tons of arsenic ore and good work for tin. No. 2 stope in the back of this level is set to four men, at 42. per fathom; lode producing 6 tons of arsenic ore and fair quality tinstuff. No. 3 stope in the back of this level is set to four men, at 34. 10s. per fathom; lode producing 8 tons of arsenic ore per fathom. No. 1 stope in the bottom of the 65 is set to six men, at 24. per fm.; the lode is producing good tinstuff, and 6 tons of arsenic ore per fathom. No. 1 stope in the back of the 65 is set to four men, at 44. per fathom, and is producing 8 tons of arsenic ore per fathom. No. 2 stope in the back of this level is set to four men, at 104. 10s. per fathom; lode with 10 tons of arsenic ore per fathom. Western Part of Mine: No. 1 stope in the bottom of the 50 is set to four men, at 54. per fm.; lode worth 11 tons of arsenic ore per fathom. No. 2 stope in the bottom of this level is set to stope, by four men, at 44. 4s. per fathom; lode worth 8 tons of arsenic ore per fathom. No. 1 stope in the bottom of the 35 is set to eight men, at 44. 10s. per fathom; lode producing 12 tons of arsenic ore per fm.

OLD GUNSLAKE.—W. Skewis, R. O. Seacombe, Oct. 4: Since last report we have completed cutting ground, putting in tramroad, fixing pipes, &c., and have resumed driving the end which we are pressing on with all possible dispatch. The lode maintains its full size, and carries a good leader of rich quality copper ore on its footwall. We have now opened a distance of over 12 fms. on the course of this lode, and from its bearing and general character we are confident we shall soon reach its junction with the main or Bonny lode, and that good results will be obtained.

OLD SHEPHERDS.—R. Nancarrow, J. Nancarrow, Oct. 2: Since our report of the 18th ult. we have pleasure in informing you we have dropped our lift to the 90 fathom level, to which point we hope to be drained by to-morrow morning, where we expect to find a cross-cut north to the lode. As we drain the mine we find the shaft in some places requires timbering, which we are making secure as we go down, but no time will be lost to make our next drop sufficiently deep to fix a drawing-lift 25 fathoms in length, after which our lift will be dropped to the 100, and the mine soon drained to that point. At old sump we have found a cross-cut south in the 82 to the lode; at this point the shaft has caught a choke, but owing to the air being so bad to-day the men cannot get down to anything. The cause of this we think to be foul air escaping from the old workings, which will greatly facilitate our clearing the levels, and open up tribute ground. This we hope to be able to speak more definitely on in a few days. Teague's shaft is now made good to the depth of the skip below the 72, at which point we find the lode has taken a more perpendicular bearing. Here we shall at once fix the skip-road from the 64 to the 72, so as to enable us to clear the levels east and west, and open up more lead ground, as well as push on the securing of the shaft to a deeper level. We are clearing the 72 cross-cut from Harvey's to Teague's shaft for ventilation, which will be completed as soon as possible. Our tribute pitches are yielding fair quantities of lead, and dressing operations in full activity preparing parcels of mineral for the market. Surface operations proceeding favourably, and all machinery in good order.

PANDORA.—W. H. Boriase, Oct. 3: The winze sinking below the 13 on No. 2 east and west lode, is still looking very well. I think the lode is increasing in width as we go down, the composition of which is very desirable for making a good profitable lode in depth. We have not cut the lode in the 23 cross-cut yet, but are daily expecting to. We have struck the large floor seen under the footwall of the lode at the 13, in cutting through upon which we find the ground strongly impregnated with sulphur, and the heat or joints carrying more lime mixed with fine blende; I think a short distance only intervenes between the forebrest and the lode. We took up the road in the 33 on No. 1 east and west lode, but finding the water likely to be troublesome to sink I removed the men to the 45, west of shaft. The lode in present end is looking promising, producing 20 cwt. of lead and blende per fathom. No. 1 stope, east of winze, in the back of this level, is producing 35 cwt. lead per fathom. The tribute pitches are looking very well, producing good lead and blende. We are not making the progress in dressing I could wish for, owing to the machinery being left to go so much out of repair; I am getting it renovated as fast as possible, and we have plenty of good leadwork waiting treatment.

PARYS COPPER CORPORATION.—T. Mitchell, Oct. 4: The end at the 90, east of cross-cut, is going forward in promising looking ground, and producing occasional stones of copper ore and sulphur. The end driving west of cross-cut at this level is mixed up with small strings of copper ore and sulphur, with a little blende. The ground here looks kindly.

PATTERSYKE AND CLARIGILL HEAD.—John Peart, Sept. 28: There is no change to report at John's Burn Head level.—Low Level: From the rise top at the level forehand we have drifted north in Sir John's vein 8 fms., and holed into the old air rise, and have a circulation of air up to the forehand. We will now commence a new drift in the copper haze to drive south up to the intersection of the two veins in the most suitable part for meeting with ore, and also for driving cheaply. In the end going north we met with nice samples of ore, and in driving south we met with good ore, having a strong vein, a good strata, and a large extent of ground, and I may say we are now in a position to prove it.

PENHALLS.—S. Bennetts, J. Goyno, Oct. 3: The lode in the 80 west end is producing some low quality tinstuff, but not of much value. The 70 east end is worth 74. per fathom. In the 60 east end the lode is 2 ft. wide near a small cross-course, and at present poor. In the 60 north cross-cut there is no further lode intersected as yet, beyond the copper-bearing one passed through some 2 fms. behind the end. On the Balduh lode the 42 west end is yielding some tinstuff of low quality.

PEN-YR-ORSEDD.—Oct. 4: In the bottom cross-cut we have intersected the first branch of the middle lode, and have already obtained some very strong stones of lead in the spar. In a few days I expect to be able to report that we have intersected the stronger part of the lode, and I feel anxious that we have at last hit upon something likely to prove of great value to us.

POLROSE.—W. Bennetts, Oct. 3: Last Saturday was our pay and setting, when the shaft was driven to the 112 was reset to sink to 12 men, at 254. per fm. The lode is still disordered by the horse I mentioned in last week's report, but the lodestuff which we are saving out as carefully as possible is of a little better quality, and will do 1½ per cent., or about 30 lbs. of tin to the ton of stuff; and I hope that when the lode gets more settled again the percentage of tin will be yet higher.

PRINCE OF WALES.—S. Roberts, Oct. 3: Setting Report: The 102 east set to six men, at 64. per fathom; lode 1½ ft. wide, and producing excellent quality copper ore and blende. The 102 west set to six men, at 34. per fathom, and is producing 35 cwt. lead per fathom. The lode is in the level above. The stope in the back of this level, to two men, at 64. 6d. per ton; lode 3 ft. wide, and worth 74. 10s. per fathom for tin. The 102 west, to six men, at 34. per fathom; the lode when last taken down 3 ft. wide, worth 124. per fathom for tin and copper ore. The stope in back of this level, east of the rise, to six men, at 54. per fathom; lode 7 ft. wide, and worth 104. per fathom for tin and copper ore. The 90 west, to four men, at 64. per fathom; lode 4 ft. wide, worth 84. per fathom for tin and copper ore. The stope in the back of this level, to four men, at 64. per fathom; lode 3 ft. wide, worth 74. per fathom. No. 1 stope, in back of the 90 east, to two men, at 74. per ton of tin, and 10s. in 14. for copper ore; lode 3½ ft. wide, worth 74. per fathom. No. 4 stope, to four men, at 64. per fathom; lode 4 ft. wide, worth 84. per fathom. The cross-cut north, in the 55 west, to two men, at 44. 10s. per fathom. We have cut the lode on the east side of the cross-course, which is fully 3 ft. wide; we must continue the cross-cut a little to reach it in the western level.

ROMAN GRAVELS.—Arthur Waters, Oct. 4: The various points throughout the mine are quite up to the valuation given of them in our general report submitted to the shareholders at the meeting on the mine to-day. We send out samples of 250 tons lead ore for sale next week.

SORTRIDGE.—J. Axford, Oct. 4: During the last month we have driven the cross-cut north 4 fms. 3 ft.; the end still continues very wet, clearly showing that the lode we are in search of is yet ahead of us. We shall not commence operations on the new lode mentioned in last report until the Great North Tin lode is intersected.

SOUTH CONDUROW.—Wm. Rich, Wm. Williams, H. King, Oct. 3: The ground is easier for working in the 54, west of Marshall's, than it has been, and the lode opening out wider. The 66 end west is worth 104. per fathom. The 75 east is worth 204. per fathom. The 93 west is worth 74. per fathom. The ground is favourable for driving the 93 cross-cut south. The 90 end, east of King's, is worth 84. per fathom. The rise in the back of this level is worth 154. per fathom. The 70 end east is worth 154. per fathom, and the stope in the back of this level is worth 104. per fathom. The 50 end east is worth 84. per fathom, and a winze in the bottom of this level is worth 84. per fathom. The 40 end east is in a strong kindly lode.

SOUTH DARREN.—Henry James, John Mitchell, Oct. 4: The lode in the 130 east is about 2 ft. wide, and worth 2 tons of silver-lead ore per fathom. In the 130 west the lode is getting stronger, and is intermixed with a little lead ore, but not yet sufficient to value. The lode in the winze in the 120 west is worth 1 ton of silver-lead ore per fathom and 10 cwt. of copper ore per fathom. No. 1 stope, in the back of this level, is worth 2 tons of silver-lead ore per fathom. No. 2, 1 ton; No. 3, 10 cwt. No. 1 stope, in the 130 east, is worth 12 cwt. of silver-lead ore per fathom. No. 2, 2 tons. A stope in the back of the 110 east is worth 10 cwt. silver-lead ore per fathom and 10 cwt. of copper ore per fathom. Drawing and dressing are being pushed on as fast as possible.

SOUTH DEVON UNITED.—Wm. Hooper, Oct. 4: I have great pleasure in saying the lode in Martin's shaft is fully 6 ft. wide, with a value of 184. per fm, with a most promising appearance, and I do not hesitate to say it carries with it every desirable feature for great success. Below this point the 110 courses of ore will be laid open equal in importance to any seen in this property when good dividends were paid. We have every reason to expect this from the fact of all the courses of ore driven through in the upper levels are dipping east towards this point for a more rapid progress. We shall at once put nine men in this shaft, and in the meantime shall put the wire rope in position, and prepare lift, &c., that there may be as little delay as possible in pushing on this important work. The lode in the 110, east of Martin's shaft, is 5 to 6 ft. wide, worth 84. per fathom; at present the lode is a little disordered, with patches of kilias; this we look upon as only temporary. The stope in the back of this level, east of Brook engine-shaft, are worth respectively No. 1 84. and No. 2 104. per fm. In the stope in the back of this level west the lode is 4 ft. wide, worth 94. per fm. The ground in the 100 end, east of Martin's shaft, is of a very favourable description for production of copper ore. We still find occasionally good stones of the above, and have not the least doubt, but what this point of operation will again become very productive. The stope in the back of this level is worth 94. per fm. The lode in the 90, east of Martin's shaft, is without any particular alteration in size and character since last reported on. The lode in the 79, west

of old sump shaft, is without change, still of a very favourable nature for the production of copper ore. The lode in the adit level, west of old sump shaft, is 5 ft. wide, producing occasionally good stones of ore.

SOUTH FRANCES.—Chas. Craze, Oct. 3: Pascoe's shaft is being sunk with good speed; the lode here is not quite so valuable for tin as it was; now worth 404. per fathom for length (12 ft.); but as the size and principal characteristics of the lode are the same, and no disturbance in the country rock about it, we expect an improvement again at an early date. The 226 west is looking quite as well as we have ever seen it, and worth fully 454. per fathom; and the lode in the bottom where we are cutting a trip-plat is worth 254. per fathom. A stope in the back of the 226, west of winze, is worth 154. per fathom, and a stope east of same is worth 254. per fathom. One stope east of Pascoe's, in the back of the 226, is worth 154. per fathom. The 215 west is worth 104. per fathom, and a winze in the bottom is worth 204. per fathom. No. 1 stope, in the back of the 215, is worth 164. per fathom. No. 2 stope, is worth 134. per fathom; and No. 3 stope is worth 124. per fathom. At the 205 east we have commenced to rise in the back against Marriott's shaft, where good speed is being made in that work, and the shaft coming down on this is being pushed on with all possible speed. There is no particular change in any other part of the mine calling for remark at present. We have repaired one of our boilers at Marriott's in the last fortnight, and are now repairing the one taken out at the stamps, and shall put it in thorough order as a reserve one to keep on the mine. All the machinery throughout the mine is working well.

SOUTH PENRITHAL.—Stephen Davey, Oct. 4: Walton's Engine Shaft: The men are making good progress with the sinking of this shaft below the 100 fm. level.—Flat Rod Shaft: The lode in the 150 fm. level driving west is from 8 to 10 ft. wide, and presents a better appearance as we advance with more copper interspersed—a very fine looking lode; the same remark will apply to the 150 fm. level driving east. We shall commence next week to cut eastern plat, bearer-hitches, &c., for fixing a standing lift at the 150, and the necessary preparations for going below.

TAMAR SILVER-LEAD AND FLUOR-SPAR.—R. Goldsworthy, Oct. 4: The lode in the 57 is still owing to a large floor of capel having come in; but this, we think, is only temporary, no doubt as the end is extended it will soon open out to former size and value. The 27 cross-cut east no lode has been intersected yet; there is a great change in the character of the ground, which leads us to hope the lode is not far off. The lode in the stope in the back of this level is about 2 ft. wide, the ore bearing part being 10 in., producing 6 cwt. of silver-lead and 2 tons of fluor-spar per fathom. The lode in the 32 south from new shaft is 1 ft. 6 in. wide, composed of congeal capel, friable spar, spots of mundie, blende, and silver-lead, and letting out water freely, which we think is indicative of something good ahead.

TANKERVILLE GREAT CONSOLES.—A. Waters and Son, Oct. 4: A full report on all the mines having been submitted to the shareholders at the general meeting held on the mines yesterday, and taking for granted that a copy of our report was sent to every member of the company from our London office, there can be no need for going into particulars again to-night. We shall, as requested by the directors, send you a special report on the mines, embodying questions of an important character to all interested in the future development and prosperity of the mines.

TREGBERG.—Edward Chegwain, Oct. 3: In about 2 fathoms more I expect to communicate the rise to the eastern shaft. In Pinnick's shaft, sinking below the adit level, the lode is 5 ft. wide, worth for tin 144. per fathom. In the 16, east of cross-cut, the lode is 3 ft. wide, worth for tin 144. per fathom. In the 16, west of cross-cut, the lode is 3 ft. wide, worth for tin 124. per fathom. We have communicated the rise to the western winze, and have now ready for stopping a large and rich piece of tin ground. All our stopes are looking well. Our engine-stamps are working well. The calisher is burning to my satisfaction. Shall sell and use the level on next week.

TREVAUNICE ENGINE SHAFT.—W. Vivian, Oct. 4: We have cut through the copper lode; it is about 2 ft. wide, very good indeed, worth 154. per fathom. I have set the cross-cut again to drive at 84. per fathom. I consider the tin lode is still to the south of us. I think there is a good course of tin somewhere near this copper. This lode was cut in the eastern part of the mine many years since and copper sold from it; but there was a good tin lode some 2 or 3 fms. farther south, and our cross-cut still shows signs that there is still more lode south.

WEST CREBOR.—J. Andrews, Oct. 3: There is no change in the 76 ends east or west since our last report. We commenced on Monday to cut through the lode in the 52 west, and have up to the present time cut into it about 2½ ft., but as yet no south wall; 18 in. of the north part of the lode is principally apert and capel, but for 1 ft. south of the capel, and so far as cut into it yields good saving work for copper ore, and looks promising for further improvement.

WEST GUDOLPHIN.—T. Hodge, F. Hodge, Sept. 28: The sumpmen are engaged cutting flat-plat at the 80 fm. level, which will be completed in a few days, when we shall commence to send down our pitwork for the standing lift, set to work, and commence sinking at once, which will then go on uninterruptedly.—Pink Lode: The winze is again realizing its former value, worth 154. per fm. The stope in the back of the 80 east is worth 204. per fm. Bellingham's Lode: The 70 east produces some rich grey copper ore, dressing work. On the caunter lode the stope in the back of the 80, north-west of Pink lode is worth 64. per fathom. The winze-shaft is now down the required depth for the 30, and we shall now drive a cross-cut to communicate with the same. The lode in the 20 north-west has been poor for several fathoms, but to-day it appears to be changing for the better: lode 2 feet wide, composed of gossan, mundie, and quartz. The 20 west is again realizing its former value, at 11s. 6d. and 13s. 4d. in 12, to be paid 454. per ton for black tin. All our machinery is working well, and kept in good condition.

WEST GONAMENA.—N. Rickards, Oct. 4: The main lode in the adit level, driving west of shaft, is about 3 ft. wide, composed of peach, prlan, mundie, and stones of grey copper ore, altogether a most promising looking lode for the depth, 13 fathoms. Gilpin's lode, in the midway level, driving east of main cross-course, is about 20 in. wide, and will yield 1 ton of good ore per fathom. The 20 west, to four men, at 64. per fathom. The 20 east, to four men, at 64. per fathom. The 20 north, to four men, at 64. per fathom. In driving the cross-cut north towards the new lode, from the present approach and indications, I hope to have something good to report upon at an early date. The pumping machinery, &c., is working well, and in good order.

WEST WHEEL SETON.—Charles Thomas, Oct. 3: Mitchell's engine-shaft is sunk 7 fms. below the 216, the lode being worth for 12 ft. long and 12 ft. wide 804. per fm. The 216 west is driven 38 fms. from the shaft, and is now 15 fms. short of the run of productive tin ground driven through in the 204. During the last few days the lode has been running 3 ft. wide, and is having a very kindly appearance. We drove 5 fathoms in this end last month. The 204 west is worth 124. per fm. Just over the present 204 end west we have a winze sink 7 fms. below the 190, worth for 9 ft. long 154. per fathom. We expect to hole this ground in two months. We have put up a rise in the back of 190 west 9 fms., where the lode is worth for 9 ft. long 154. per fathom. This, when holed to the 175, will open up a fairly productive stope. The stopes and tribute pitches continue to yield about the usual quantities of tin. No other change in the mine.

WEST WHEEL TOLGUS.—John Gilbert, Oct. 4: Richard's Shaft: The lode in the 105, west of shaft, is divided into two parts by a horse of kilias; each part is ½ ft. wide, and composed of spar, spotted with mundie and copper ore, and the ground is better for driving. In the 85, west of shaft, the lode is 3½ ft. wide, yielding a little mundie and copper ore, and looking more kindly. It is still letting out a very large stream of water. The stope in the bottom of the 105, west of shaft, is yielding 2½ tons of copper ore per fathom. The tribute pitch in the bottom of this level are not looking quite as well as when last reported.

WHEEL CASTLE.—J. Boyns, Sept. 29: In the adit level Wheel Castle the properties of the ore are improving for mineral, and is producing some good copper ore. The men are still clearing and timbering the south adit level on Forman's lode. We expect soon to reach the intersection of one of the lodes before us. The engineers are very busy engaged putting in the engine. Men are fixing the capstan for heaving down the pitwork, &c., also putting in the skip road. All hands are trying to get ready to put the engine to work as fast as possible.

WHEEL CREBOR.—H. Phillips, P. D. Holman, Oct. 2: Setting Report: To drive the 144, east of new shaft; this end is being forced on by six men towards the course of ore going down in the bottom of the 132, east of No. 2 winze, the lode is unproductive. To drive the 144, west of new shaft, by four men, stent the month, at 64. 10s. per fathom; the lode is 18 in. wide, producing good stones of ore and mundie. To sink a winze in the bottom of the 132, west of shaft, by four men, stent the month, at 104. per fathom; the lode will yield 4 tons of ore and 1 ton of mundie per fathom. To drive the 132, east of No. 2 winze, by eight men, stent the month, at 44. per fathom; the lode is 8 ft. wide, yielding 14 tons of ore per fathom, also 2 tons of mundie. No. 1 stope, in the back of the 132, by six men, stent the month, at 144. 15s. per fathom; the lode will yield 10 tons of ore and 2 tons of mundie per fathom. No. 2 stope, in the back of the same level, by six men, stent the month, at 44. 15s. per fathom; the lode will yield 7 tons of ore and 3 tons of mundie per fathom. To strip down the lode in the north side in the back of the 132, by four men, as per bargain, at 124. per fathom; the lode will yield 4 tons of ore and 1 ton of mundie per fathom. To drive the 108, east of winze, by two men, stent the month, at 84. 10s. per fathom; the lode is unproductive. To drive the 108 fm. level cross-cut north to intersect the Bridge lode, by four men, stent the month, at 104. per fathom. We have taken two men from this point, and put them to open out on a branch on the east side of the cross-cut, which contains spar, white iron, and arsenical mundie. This branch appears to be in the channel of ground where we expected to cut the Ding-Dong lode. To drive the 72, east of new shaft, by four men, stent the month, at 64. per fathom; the lode has a more promising appearance, also the kilias appears to be more congenial as a mineral-bearing agent; water is still flowing from the forebrest. To drive the 48, east of the new shaft, by four men, stent the month, at 84. per fathom. The lode will yield 4 tons of ore and 3 tons of mundie per fathom. To stope the back of the 48, by two men, stent the month, at 44. per fathom; the lode will yield 3 tons of ore and 2 tons of mundie per fathom. We have suspended the stope in back of the 108 to fill with atle; when this is accomplished the stope will be resumed.

WHEEL GRENVILLE.—T. Hodge, Oct. 4: I have nothing new to report this week. The ends and stopes are without any change to notice, and the machinery throughout the mine continues to work satisfactorily.

WHEEL HONY AND TRELAUNY.—William Derry, John Pearce, Hubert Lanyon, Oct. 3: On Friday last a branch about 6 in. wide came into the western side of the 108 end, and has since increased to nearly 2 ft. in width, composed principally of capel and fluor-spar, with a branch of rich silver-lead on the foot-wall worth fully 124. per fathom, and letting out a quantity of water. The other part of the lode is now 3 ft. distant, and running parallel with this; no doubt the two will unite toward with increased productivity, as the nature of the ground is all that can be desired. The rise in back of this level is going up in good stopping ground. Driving the 78 end has commenced with the rock-drill, and it will be sufficiently distant from the cross-course recently intersected for putting out a cross-cut in a week from this date; and, as the ground is of a most congenial character, no doubt a productive lode will be cut. Derry's shaft is about 13 fms. below the 78. The prospects here within the last week have considerably improved.

WHEEL UNY.—W. Hamby, W. Prophet, J. White, Oct. 4: Setting Report: The 193 to drive west of Hind's engine-shaft, by six men, at 84. per fathom; the lode is full size of the end, and worth 64. per fathom. The 193 to drive east of the shaft, by six men, at 54. per fathom; 14 fathoms east of the present end is Gooding's cross-course, east of which in the level above we had a good run of tin ground for 20 fathoms in length, to get under which we have set a contract to this part of mine to drive 20 fathoms at the above price. This work we hope to accomplish in about 10 or 11 weeks from this time. The 182 end to drive west of shaft, by six men, at 54. 15s. per fathom; the lode in the end is composed of

quartz, peach, and mundie, and worth for tin 154. per fathom. We have 20 men employed in stopping in the back of the 182, 178, and 160 fm. levels; the different stopes are worth on an average 134. p r fathom, each stope working at the average price of 3s. 6d. per ton of stuff. There is no alteration in the tribute department this time. The machinery throughout the mine is working well.

WYE.—J. Kitto and Son, Sept. 29: During the past month the sinking of the new shaft has been continued uninterruptedly by nine men, and good progress has been made. The shaft is now down 8½ fms. below the 58, and we expect to sink it the necessary depth for driving out a new 70 in about six weeks from this date, when we shall cross-cut to and open on the lode, from which we hope to obtain very satisfactory results.

YSTWIT.—J. Kitto and Son, Sept. 29: We have resumed and are making good progress in driving the adit cross-cut south, which at present is passing through a compact stratum of clay-slate, in every respect congenial for the production of a lead ore, and similar to the rock accompanying the richest lodes in this district. We are, therefore, of opinion the intersection of the lodes which now stand unexplored before this end is a very promising and important trial, and one that will in all probability result in laying open a profitable and permanent mine; we shall, therefore, push on the cross-cut towards the desired object by the rock-drills and a full set of men as fast as possible.

THE PERRANZABULOE MINING DISTRICT.

For many months past various correspondents of the *Mining Journal* have directed attention to the attractions offered to capitalists by the mines of the Perranzabuloe district; and the improving prospects of mining enterprise generally has been taken advantage of to bring forward a promising undertaking—the Duchy Peru Mines—as the first step to restore the activity and prosperity for which the locality was celebrated. It appears from an interesting report of Professor Kinahan, of the Royal College of Science, Dublin, that the property is about eight miles from the city of Truro, and about a mile from the rising town and shipping port of Newquay, and he explains that the sets constituting the property are the Great Peru sett, to the west of the property, the Duchy sett to the south, and the Great North Shepherd's sett to the east of these two. Each sett is held under lease on favourable terms, and the whole embraces an area of about 500 acres of good mineral ground. The country rock is kilias, or talcosic slate, through which several east and west elvans run. The chief lodes are a series of north and south lead lodes, which produce large bunches of silver and silver ores in certain places. Four of these lodes have been proved to pass through the Duchy property, through which the Great Perran iron lode also runs, making an important series of intersections with the north and south lodes, where valuable deposits have been found. In this extensive lode several valuable shoots of chalybeate (spatheose iron ore) and blende (sulphide of zinc) have been proved, some of which at a moderate depth are found to contain large quantities of argentiferous galena. The main branch of the Cornwall Minerals Railway runs through the property, and the dressing-floors of the Duchy Mine are connected by an inclined tramway with the line, and are thus placed in direct communication with the ports of Newquay on the north and Fowey on the south coast. The Mexico lode passes through the western portion of the property, and on it the first silver mine worked in Cornwall was opened about 1788, which proved to be extraordinarily rich in native silver and argentiferous galena, especially at its intersection with the elvan towards the north-west boundary of the Peru sett. On the southward extension of the lode a large deposit of rich argentiferous galena and native silver was found. Trebellan Mine was opened on this lode to the north at its intersection with an east and west elvan. Here some parcels of ore produced upwards of 7000. per ton.

From this it would appear that there is an extensive field for enterprise in this district, and it may be assumed that with the necessary capital and good management a permanent and remunerative business may be established. It is mentioned in the report of Captain Phillip Argall that hitherto the principal mining operations have been confined to the Duchy sett, where an engine-shaft has been sunk to a depth of 80 fms. from surface, proving an extensive shoot of spatheose iron ore, averaging 3 fms. wide and 10 to 15 fms. in length; the ore is of first-class quality, and superior to any found in the great lode; the shoot in the shallow levels, being almost pure carbonate of iron, is found in depth at the 70 and 80 fm. levels to be mixed with small veins and stones of silver-lead, which are found to increase as depth is attained. This would go to show that the immense mass of iron ore in this great shoot is in depth gradually being replaced by the more valuable mineral—silver-lead. Referring to the various deposits of the Peru sett, Captain Argall states that each of them produced native silver and argentiferous galena that brought a very high price. Various caunters can be seen in the railway cuttings and elsewhere that will intersect the Mexico lode in new ground, and we may fairly assume that rich and valuable deposits will be found at these points. The Duchy Mines are well provided with machinery, both for the drainage of the mine and hauling and dressing the ores. The dressing-floors are well laid out and supplied with the best modern dressing machinery, and a large sawmill is attached for cutting the timber required for the mine, while the surface generally is complete with all necessary buildings required. In conclusion, he adds that the Duchy Mine sets (either of which is a large mine in itself), with their numerous north and south lodes, rich in silver, their various caunter lodes and elvans forming important junctions and intersections, the great length (3 mile) on the course of the iron lode, with its shoots of lead, blende, and iron ore, show the property to be a very valuable one, and one that only requires a moderate capital to open out its resources, which, with proper development, would long continue not only a considerable source of profit to the investors, but a great boon to the neighbourhood.

It is to develop the property thus favourably reported upon that the Duchy Peru (Limited), with a capital of 50,000*l.*, in shares of 1*l.* each, and the prospectus of which will be found in another column, has been formed under the auspices of the Home Mines Trust (Limited), which appears thus far to have been exceedingly fortunate in its selection and investments, since only a few days since it declared the very satisfactory dividend of 20 per cent. per annum upon the year's operations. It is mentioned that the company will acquire an exceptionally rich property, its native silver and silver-lead lodes forming numerous junctions with the great champion lode of the district, thereby practically ensuring very high dividends, and the chief features are summarised as—the acquisition of three large properties in the richest silver-lead producing district in England; that the silver-lead from various points has realised the extraordinary price of from 700*l.* to 800*l.* per ton, while about 5*l.* or 6*l.* per ton is considered sufficient to raise and bring it to market; that the company takes over a "going concern," on which about 70,000*l.* has been expended, replete with the most modern machinery, and producing large quantities of mineral; and that to make it one of the foremost mines in Cornwall it is estimated only a small additional amount will be required. Few undertakings commence with greater promise, and there is no apparent reason why, with ordinary good fortune and judicious management, those promises should not be realised.

ARIZONA AND NEW MEXICO.—The vast resources of this richest country under the sun are, says the *Albuquerque Journal*, being steadily developed. Many millions of dollars are annually extracted from its mines and shipped away to swell the wealth of the commercial marts of the world. Upon a thousand hills the seams and ledges, teeming with metals, are yielding their treasures to the energy and industry of man. Arizona has the richest copper and some of the richest silver mines in the world. Gold is found everywhere. Iron, and every other metal useful in the arts and manufactures of the world is produced in varying quantities. Its rich and fertile soil is made to yield agricultural products equal to the needs of the inhabitants, with a margin to spare for export. The output of bullion from Arizona mines in 1882 was nearly \$12,000,000, and it is probable that the current year will show a largely enhanced yield. But one thing is needed to ensure an immensely increased yield of silver and copper—the erection of concentration and reduction works at convenient points. The erection of smelting works at Tucson, Benson, Casa Grande, and other points contiguous to the mines carrying low grade ores—of which there is an unlimited supply throughout the Territory—would bring into immediate prominence and productivity thousands of mines that are now lying fallow. For this purpose capital from abroad is needed. There is a better field for investment to-day in Arizona, in the enterprise suggested above, than in any avenue open.

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The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, OCT. 5, 1883.

IRON.	£ s. d.	TIN.	£ s. d.
Pig, O.M.B., Clyde...	2 7 0	English, ingot, f.o.b. ...	97 0 0-98 0 0
" Scotch, all No. 1 ...	2 7 0	" bars ...	98 0 0-99 0 0
" Bars Welsh, f.o.b. Wales ...	2 7 0	" refined ...	99 0 0-100 0 0
" " In London ...	5 17 6	Australian ...	94 7 6-95 0 0
" Stafford ...	7 2 6-7 5 0	Banca ...	94 7 6-95 0 0
" In Tyne or Tees ...	5 15 0-5 17 6	Straits ...	94 7 6-95 0 0
" Swedish, London ...	9 10 0-9 15 0	COPPER.	
" R.W. Welsh, at works ...	5 7 6	Tough cake and ingot ...	65 10 0-66 10 0
" Sheets, Staff., in London ...	5 5 0-8 10 0	Best selected ...	68 10 0-69 0 0
" Plates, ship, in London ...	8 10 0-8 15 0	Sheets and sheathing ...	73 0 0-75 0 0
" Hoops, Staff., in London ...	7 0 0-7 5 0	Flat Bottoms ...	76 0 0-78 0 0
" Nail rods, Staff., in Lon. ...	6 15 0-7 0 0	Wallbars ...	68 0 0-69 0 0
" Straits ...	12 0 0-13 0 0	Burra, or P.C.O. ...	67 10 0-68 0 0
" English spring ...	12 0 0-13 0 0	Other brands ...	65 10 0-66 10 0
" cast ...	30 0 0-35 0 0	Chilli bars, g.o.b. ...	62 7 6-65 15 0
" Swedish, keg ...	15 0 0-	QUICKSILVER.	
" bag, ham ...	15 0 0-	Flasks, 75 lbs., war. ...	5 5 0-
" Rails at works ...	4 10 0-4 15 0	PHOSPHOR BRONZE.	
" Light, at works ...	5 5 0-	Alloys I., II., and IV. ...	£114 0 0
LEAD.		" VI. and VII. ...	135 0 0
English, pig, common ...	12 7 6-12 10 0	" XI., Duro A, Duro B ...	113 0 0
" " L.R. ...	12 15 0-12 17 6	BRASS.	
" " W.B. ...	13 0 0-13 2 6	Wire ...	63 4 0-
" sheet and bar ...	13 7 6-	Tubes ...	9 0 0-
" pipe ...	13 12 6-	Sheets ...	7 0 0-
" red ...	16 0 0-	Yel. met. sheath. & sheets ...	5 10 0-6 10 0
" white ...	18 10 0-20 0 0	TIN-PLATES.*	
" patent shot ...	15 15 0-	Charcoal, 1st quality ...	1 1 0-1 2 0
Spanish ...	12 2 6-12 5 0	" 2nd quality ...	0 19 0-1 0 0
NICKEL.		Coke, 1st quality ...	0 17 0-0 17 6
Metal per cwt. ...	—	" 2nd quality ...	0 16 0-0 17 0
Ore 10 percent. ton. ...	—	Black ... per ton	15 0 0-
SILVER.		Canada, Staff. or Gla. ...	12 0 0-
Silesian, ordinary brands ...	15 10 0-	at Liverpool ...	12 0 0-
" special brands ...	15 15 0-	Black Taggers, 450 of ...	30 0 0-
English Swansea ...	15 12 6-	14 x 10 ...	—
Sheet zinc ...	19 0 0-		

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; 1X 6s. per box more than 10 quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—The markets for the various metals have continued quiet, and prices have tended slightly in favour of buyers, who, however, have not been very ready to avail themselves of the easy rates. In the first week of a new month the attention of the trade is naturally directed to the statistics which then come to hand, and here we may get some insight into the easy tendency of prices this week, for in all instances the figures come out more or less unfavourably. At the close of last month buying appeared as though it would not unlikely develop into activity, more for speculation, however, than for the general wants of the metal trade; but even where this was the prominent and characteristic feature there has now been a manifest change made, and not only have buyers withdrawn from the market, but have also in instances somewhat pressed sales, and thus caused prices to recede. This is a very natural course for recent operators to have adopted, for unfavourable statistics almost all round are features difficult at all times to contend with. They point to heavy supplies or bad deliveries, or perhaps both; they give the impression that the business actually done has been more speculative than genuine, and further show the markets to be more over-weighted, which will, in all probability, necessitate a longer period to elapse before any real and sensible recovery does take place. However, while statistics taken in the main are unsatisfactory, yet the increase shown to have been made in stocks during the month of September has not been very large in any metal. In iron the largest increase has been made, but as the stocks of iron are always much heavier than those of other metals the increase cannot be reckoned proportionately heavy.

In these general remarks of the various metals it is interesting to note that it is the same cause that has been the means of augmenting the public stocks of all the leading metals. It is not heavy supply in the one case and reduced deliveries in others that has been the means of swelling stocks, and thus burdening the markets, but over-production may be seen to have been the cause throughout. In instances some very good deliveries have been recorded, proportionately large, too, with corresponding periods, but yet not sufficiently good to prevent stocks from being increased. It is not much satisfaction to learn that the increase has not been excessive, for any increase at all is enough to show that supply is being kept ahead of the requirements of the trade, and, therefore, the prospects are viewed by recent operators with uncertainty, and no small amount of anxiety. Hence, many have thought it advisable to take advantage of any recent rise, and make whatever profits are practicable, and in other instances operators have deemed it prudent to cut their risks, and accept the best prices obtainable when profits are altogether out of the question. It must not, however, be concluded that all operators are anxious sellers; some holders still cling to their stocks with much tenacity, and do not view the easiness of prices this week as the forerunner of still further reduced rates, but on the contrary as a mere temporary reaction, and even yet, notwithstanding that the first month of the autumn has elapsed, there may be some sensible and thorough recovery made in the trade during the next few months. However, that is a question for time alone to decide; the statistics which are now to hand, and upon which we dwell more fully in our reports of the various metals under their respective headings, are such which give no room for encouragement, which dullen instead of brighten the prospect, and which give no indication whatever of any likelihood or chance of a reduced supply of any metal. It would seem if the statistical position of the markets is to be improved deliveries must increase, for there is nothing to show that suppliers have any intention whatever of curtailing supplies.

COPPER.—This week the copper market has been very dull, and prices have tended against holders. The market was weakened at the commencement of the week by the statistics which were issued for the month of September, when the total visible stock was announced as 49,695 tons, against 48,735 tons on Aug. 31, being an increase of 960 tons. This naturally damped the tone and depressed the market, but the feeling somewhat revived when the Chilli charters for the latter half of September were advised as only 1200 tons. This feature having about counter-balanced the adverse effect of heavy stocks the market until yesterday remained fairly steady, but with next to nothing doing. Buyers refuse to come forward, and holders held to their stocks hoping that buyers would soon come into the market. But yesterday they were no longer able to sustain prices, and Chilli bars receded fully 7s. 6d. per ton in value, but without forming any inducement to buyers to make purchases. It is the demand for Chilli produce that is so much depressed at the present time, and this arises from the absence of any feature to encourage speculation. On the contrary, operators find that nearly everything is against them.

Taking, for instance, the Chilli statistics it is found that the imports during the last fortnight of last month were 1793 tons, and the deliveries only 643 tons, which makes the total visible stock of that particular description in first and second hands in Liverpool and Swansea 27,663 tons, being an increase of 1155 tons. Again, if we take the imports of other kinds of copper for the same period they will be seen to be very heavy—2543 tons, while the deliveries were only 1755 tons. Such figures are quite enough to discourage operators, to induce holders to press sales, and to make regular buyers limit their purchases as much as possible. It is the same old adverse feature which has for so long depressed

the markets, and whilst over and excessive production continues the prominent, if not the main, feature in the market, it is hard to know from what source prices are to derive their needed support.

IRON.—This market remains very dull, and without much change. A few works, however, are reported fairly well off for orders for consumption, but for shipment there is very little doing. The trade taken on the whole is in anything but a satisfactory state, and the low prices that are being realised appear to be very unremunerative, for in not a few cases are the works closing, owing both to a scarcity of orders and to the very low prices that can only be obtained. In addition to this, there are wages disputes disorganising the markets and unsettling the whole trade. Prices must be reckoned merely nominal. Some sellers are willing to accept almost any price rather than allow what orders there may be pass by them; but others, on the contrary, prefer to do only a limited business rather than accept the present very cheap price. Under such circumstances, the advantages of making purchases at the present time cannot be too thoroughly considered by all buyers, for while the prospects are still very uncertain, yet with such extremely low prices sellers are not likely to accept present rates longer than is absolutely necessary, and should any unexpected demand arise prices would doubtless very quickly advance, and more particularly if the price of fuel continues to advance. The statistical position of the market has not improved; but, on the contrary, shows the public stock to have been further augmented, that in Glasgow last month showing an increase of 2717 tons, and in Middlesbrough there has been a decrease of 1931 tons leaving a total increase of 886 tons. In Glasgow there are warrants in circulation for 564,350 tons, and in Middlesbrough for 63,292 tons.

There is only a small business doing in makers' iron, and prices are without change. The shipments last week were smaller than what they have been of late, and also compare unfavourably with those for the corresponding period of last year. Notwithstanding that there is one furnace less in blast, yet the public stock has been further increased, and shows that a much further curtailment of supply is necessary to give relief to the market. The Glasgow warrant market opened on Monday with a strong tone, and an extensive business was transacted up to 46s. 9½d.; but this advance was not maintained, and the price receded before the close of the day, and on Tuesday there was a further pressure to sell, and a large business was done down to 46s. 3d.; but a slight rally afterwards ensued, and the market closed at somewhat above the lowest point. On Wednesday the market again took an upward turn, and various transactions were done up to 46s. 7½d., and yesterday the business done was of an extensive and good character, and the price was advanced to 46s. 10½d., at which there were buyers, while the closing figure this afternoon is 47s. The shipments last week were 13,238 tons, against 15,023 tons for the same week of last year, being a decrease of 1785 tons, and which makes the total shipments for the whole of this year 493,614 tons, against 485,143 tons for the same time of last year, and 441,851 tons for the similar period of 1881. There is one furnace less in blast, the total now being 114; but the public stock has been further increased, and amounts to 583,522 tons, against 587,275 tons last week, being an increase of 1247 tons.

The imports of Middlesbrough pig-iron into Grangemouth last week were 4815 tons, against 7495 tons for the corresponding week of last year, or a decrease of 2670 tons, and which leaves a total increase for the whole of this year, compared with last, of 24,231 tons. The Middlesbrough market is said to be steady, and but little fresh business has been transacted. The principal business that has been done in No. 3 has been at 39s., buyers refusing to pay more, except in isolated cases and for special brands. The speculative enquiry is quite dormant, and very few forward purchases are made, notwithstanding that quotations range from 6d. to 9d. below those for cash. Warrants are offering at 38s. 10½d., and the shipments last week were over 20,000 tons, and those for the whole month of September exceeded 94,000 tons, and naturally these heavy deliveries give a good deal of support to the market. The manufactured trade keeps steady, and there are no signs of a slackening of demand. The Birmingham market has displayed more favourable features, and a better feeling has arisen owing to a decision to establish the present rate of wages until the end of the year. In Staffordshire higher wages could not have been well expected, as the present rate is already said to be 5 per cent. higher than in the North. There is a very good demand for pigs, and prices for most brands are slightly dearer.

TIN.—During the past week this market has been less active and prices have mostly displayed a falling tendency, although the reaction has not been very marked—only to the extent of about 7s. 6d. to 10s. per ton. The principal business in foreign has been done at 95½ to 95½ 5s. for sharp cash parcels. The quietude which has prevailed, and the slight reaction which has occurred can hardly be reckoned as a criterion of what is likely to occur in the market in the immediate future, nor does it give any cause for surprise. It will be remembered that previous to this week this market was for a time extremely active, buying was spirited all round, and much better prices were temporarily realised, and, therefore, the reaction is but a customary occurrence. It might not have come so soon had it not been for the publication of unfavourable statistics at the close of last month, but sooner or later it was inevitable, particularly as the prices being realised for tin have been for a long time past relatively high.

There is still a fair business doing for consumption, which necessarily gives a good deal of support to the market, and the recorded deliveries for last month compare favourably with those for the same time of last year, although they are not quite equal to those for the previous month, and amounted to 1834 tons. The total visible stock increased during September to 15,583 tons, against 15,498 tons at the end of August. The shipments from Straits to London last month were 375 tons, from Australia to London 950 tons, from London and Holland to America 125 tons, and from Straits to America 900 tons. The total tonnage of Australian tin has slightly diminished, but that landing and export has been somewhat augmented. The stock of Banca in trading companies' hands and afloat is 2983 tons.

SPELLER.—The market is very firm at 15½ 10s. for ordinaries and 15½ 15s. for specials. A further rise is expected, as the demand for sheet zinc has followed that of spelter.

LEAD remains quiet at 12½ 2s. 6d. to 12½ 5s. for Spanish, and 12½ 7s. 6d. to 12½ 10s. for English.

STEEL keeps dull and prices all round are altered.

TIN-PLATES.—There is a fair demand, but wasters continue very scarce. In prime cokes a moderate business is still doing at rather better prices.

QUICKSILVER has been in good demand at the reduced price of 57. 5s., which the importers accepted at the beginning of the week, and has now touched a lower figure than was ever known before.

The Mining Share Market has been moderately active this week, and a fair amount of business transacted in general mines; but prices have not in all cases been maintained. The mines dealt in have included Wheal Crebor, Dolcoath, Devon Great United, South Devon, Prince of Wales, Parys, Gunnislake (Clitters), West Kitty, Devon Consols, Leadhills, Bratsberg, and a few others.

TIN.—This time last year Straits tin was 107½ 5s. per ton; it is now about 94½, and stocks have rather increased than otherwise. The stocks in hand at the present time are given at 15,583 tons; while in August they were 15,498. In the corresponding period of last year the stocks were less by 800 tons. In August the deliveries were 1948 tons, September, 1884 tons. These figures alone do not lead to the supposition that tin may rise in price; but it is to be hoped that it may do so ere long, as the consumption is largely increasing in America. In shares there is very little doing, and prices for the most parts are merely nominal.

Blue Hills are quoted, ½ to ¾; Carn Brea, ½ to 5; Cook's Kitchen, 20 to 21; Dolcoath, 66 to 68; East Pool, 40 to 42; East Blue Hills, 5s. to 6s.; Killfirth, 1½ to 1½; New Kitty, 1½ to 2½; North Blue Hills, 1s. to 2s.; Polrose, ½ to ¾; South Condarrow, 2 to 3½; South Frances, 9 to 9½; West Basset, 4½ to 5; West Kitty, 13½ to 14½; West Peavor, 3 to 3½; Wheal Agar, 14 to 14½; Wheal Basset, 3½ to 4; Wheal Kitty (St. Agnes), 1 to 1½; Wheal Uny, 2½ to 3½; at the meeting a loss was shown on four months' working of 1866½, and a call of 10s. per share was made. The tin sold (74 tons) realised 3825½, and the agent's report was more favourable. Wheal Peavor, 2½ to 3½; at the meeting the accounts showed a loss on four months' working of 2839½, and a call of 11s. per share was made. Owing to a breakage, only three months' ores were credited. The discovery at Great North Downs part of the mine is such, the agents think, as to leave little doubt of opening up a valuable property.

Tincroft, 6½ to 7½; at the meeting here a call of 7s. 6d. per share was made. The loss on four months' working was 2229½, and a debit balance of 6731½. The tin sold, 143 tons, realised 7411½. Wheal Grenville, 6 to 6½; at the meeting here a profit was shown of 736½ 12s. on the quarter, and a balance in hand of 1086½. West Frances, 1½ to 2½; the 174 west, on flat lode, looks like coming into a bunch of ore. Trevaunance, 2½ to 2½; the lode discovered in the 55 is worth 15½ per fathom for copper. New Trumpe, 1 to 1½; Tresavean, 7s. to 9s.; Goodevere, 1 to 1½; South Crofty, 6 to 7.

COPPER mines have been moderately dealt in, with an upward tendency in several where improvements have taken place. At the Cornwall Ticketing on Thursday the standard for ore remained stationary; produce, 7; standard, 93½ 2s. 6d. Bedford United, 1½ to 1½. Devon Great Consols have advanced to 3, 3½; the smelting of ore this month is 835 tons, and it is reported that some rich quality copper ore is being raised from the new portion called Watson's, and is likely to open out a new mine. Devon Great United, ¾ to 1; the discovery lately made in the 120 is reported worth 6½ tons per fm., and if this continues the shaft will be sunk deeper. South Devon

United have advanced to ¾, ¾; the agent reports this week that the discovery in Martin's shaft is worth 18½ per fathom. Wheal Crebor have not been quite so firm, the rise of 1½ per share having induced a few holders to realise, the shares leave off 2½ to 2½; the mine is producing fair quantities of both copper and mundaic. West Crebor, 5s. to 6s.; the lode in the 62 west, as far as cut into, is very promising for ore. Prince of Wales, 7s. to 9s.; the points of operation are producing a fair quantity of copper.

Parys Copper shares have been in demand at 3s. to 5s.; a meeting has been called to take into consideration negotiations that have been going on for some time, and may, if carried out, result in importance to the shareholders in this mine, and in Morfa Du. Gunnislake (Clitters), 2½ to 2½; Marke Valley, ¾ to ¾; New Caradon, 5s. to 6s.; New West Caradon, 4s. to 6s.; at the meeting the accounts showed a credit balance of 88½ 4s. 11d., and a call of 6s. per share (300½) was made. The agent reports very encouraging of the prospects. South Caradon (Limited), 1 to 1½. West Caradon, ¾ to ¾; at the meeting the accounts showed a credit balance of 360½ 18s. 6d., but a call of 1s. per share (600½) was made. The ores sold and credited in assets 114 tons realised 742½ 4s. 4d. The sale of May ores credited in accounts realised 742½ 14s. 2d. The agent states that deposits of rich copper ore in paying quantities are likely to be discovered, and the shareholders rewarded for their outlay and perseverance. West Seton, 8½ to 9½. South Penstruthal, 1½ to 1½; the lode in the 150, on flat-rod shaft, is now 8 to 10 ft. wide, improving as it advances, and a fine-looking lode. Devon Friendship, ¾ to ¾. Sortridge, 2s. to 3s.; the end in the cross-cut continues very wet, as though near the lode. Mellanear, 3 to 3½; the sale of ores on Thursday—512 tons—realised 1467½ 17s. 6d. New Cook's Kitchen, 2 to 3; the sale of ore here—45 tons—realised 193½ 11s.

LEAD.—Pig-lead is selling at about 12½ 5s. per ton. The smelters are giving the miners about 7½ 5s. for ore producing 80 to 82 per cent. lead, and a strong feeling is growing up among lead miners not to sell much at present ruinous prices, and the smelters must look to it. Vans are quoted 4½ to 5; Great Laxey, 15 to 16. Roman Gravel, 6½ to 7; the 85, 90, and 110 fm. levels are worth together 10 to 11 tons of lead ore per fathom. At a meeting of shareholders held on the mine this week highly satisfactory reports were submitted. Tankerville, 2s. to 4s.; the Tankerville portion has improved. Particulars of the meeting will be found in another column. Leadhills have advanced to 2½ 3; a dividend of 3s. 6d. per share has been declared, and full particulars of the meeting will be found in another column. In August, 1882, the dividend declared was 3s. per share. In June in the present year 4s. per share was declared, and now another at 3s. 6d. per share. Good discoveries have been made at the mine. South Darren, ¾ to ¾; the 130 east is worth 2 tons per fathom, and other places looking well. Weardale, 1½ to 1½; favourable reports have been received from the agents at Greenhaws, Killhope, and Partner Pastern Mines belonging to the company. East Van, ¾ to ¾; Old Shepherds, 13s. 9d. to 16s. 3d.; Gwernymynydd, ¾ to 1½; Great Holway, 5 to 5½; Sinclair, 24s. to 27s.; Coedy-Fedw, 24s. to 26s.

FOREIGN MINES.—This market remains much as last reported. Alankoo are quoted ¾ to ¾, but they appear unsaleable at any price. Alamillos, 1½ to 2; Almada and Tinto, ¾ to ¾; Arizona, 2½ to 2½; Asia Minor, ¾ to ¾; Australian, 2½ to 3; Birdseye, 1½ to 1½; Bratsberg have been weaker, and leave off 2½ to 2½, though it is said that better prices are being offered for the ores coming over. California of Colorado, ¾ to ¾; Callao Bis, ¾ to ¾; Cape Copper, 47 to 50 ex div.; Chile Gold, ¾ to ¾; the remittance for August was 3682 ozs. for 27 days with 40 stamps, from 2000 tons of quartz, against 2060 ozs. for 21 days with 30 stamps in the corresponding month of last year. Chontales, ¾ to ¾; Copiapo, 3½ to 3½ ex div.; Colombian Hydraulic, ¾ to ¾; Eberhardt, ¾ to ¾; Fortuna, 3 to 3½; Frontino and Bolivia, 1½ to 1½; Kapanga, 1-16th to 3-16ths; Lake Superior Native Copper, ¾ to ¾; La Plata, ¾ to ¾; Linars, 3½ to 3½; Mason and Barry, to bearer, 14½ to 15½; Mysore Gold, 1-16th to 3-16ths; Michipicoten, ¾ to ¾; New Emma, 1½ to 2; a very favourable report appears in the mines reports column. Nouveau Monde, ¾ to ¾; at the general meeting, at Paris, on Sept. 28, the report of the Director-Gérant and of the Conseil de Surveillance were read, and gave details of the value and prospects of the Nacupai and Berkshire properties. These, with the accounts to the end of 1882, were unanimously received and adopted. A report of the proceedings will be published next week.

Organos Gold ¾ to ¾; Orita, ¾ to ¾; Panulillo, 6½ to 6½. Potosi, ¾ to ¾; a telegram from the mines (Sept. 26) states that between 700 and 800 ozs. of gold was remitted for the month. Richmond, 5½ to 6½, and business was done to-day at 6. Rio Tinto bonds, 100 to 102 ex div.; ditto shares, 20½ to 21½; Ruby and Dunderberg, 1½ to 1½; St. John del Rey, 90 to 100; Tharsis, 6½ to 7; Tolima, 5 to 6. United Mexican, 4½ to 5½; a sample of silver ore has been received from the company's mines in Mexico, which can be seen by shareholders at the company's office. Western Andes, 5½ to 5½; the net profit for June and July was 1300½. A dividend of 2s. 6d. per share has been declared.

The Market for Mine Shares on the Stock Exchange has again been fairly active, although some check was naturally caused on Wednesday by the discovery that George Warden, the absconding secretary of the London and River Plate Bank has stolen about 110,000£, of which 70,000£ is represented by securities lodged by customers for safety, and 40,000£ was held by the bank as collateral security for advances. The effect of the discovery was not lessened by the fact of its following so quickly on the publication of the frauds of the accountant Waddell. The immense injury inflicted upon shareholders and creditors alike by itinerant accountants of the Waddell class has constantly been pointed out in the *Mining Journal*, and figures have more than once been given to show that in the case of winding up public companies' concerns with assets which had the liquidation been entrusted to men of business, would have given the creditors 20s. in 1£, and left something to return to the shareholders, have had every shilling of those assets absorbed for itinerant accountants' expenses. If competent accountants, permanently engaged, and therefore under proper control as servants, be insufficient to ensure a business being honestly conducted, the occasional visit of an accountant of the itinerant class—whether chartered or otherwise—will never make matters better. Men of the Waddell class afford no security to shareholders against those of the George Warden class; and what is still more alarming is that the Times of Thursday states accurately (on the authority of Giblin v. MacMullen) that there is some question whether a bank is legally responsible to its customers for securities lodged with the said bank for safety if those securities be stolen by the bank's servants from the bank's strong room; but certainly no bank, unless on the verge of liquidation, would attempt such repudiation of responsibility, and the directors of the London and River Plate Bank do not, publicly at least, mention such repudiation, which would inevitably ruin the bank. It was rumoured that the fraud was brought to light by the yearly audit; but if this be so it is a serious reflection upon all connected with the management of the bank, as with a proper system of bookkeeping and organisation, such as is confidently believed to be practised in other banks, any abstraction of securities, however small in value, would have been discovered within a week. The matter is one which, in the interest of joint-stock banking generally, should be thoroughly investigated.

Our usual telegram from Cornwall this evening says:—The Cornish mine share market has been quiet all the week with few transactions, the principal business being in Dolcoaths, West Kittys, Tincrofts, South Frances, and Carn Breas, the latter mine having receded in price. Although the tin statistics are rather unfavourable, a very hopeful feeling is expressed, and there are several satisfactory features in connection with the tin trade. At Tincroft yesterday a loss of 2229½ was reported, 7s. 6d. per share call being made. Capt. Teague said he was hopeful as to future of mine, or should not have taken so much trouble in developing the property and obtaining a new lease. At Wheal Peavor a loss of 28½ was shown, and a call of 11s. per share made. The prospects of the mine appear more favourable. At Redruth yesterday 767 tons of copper ores realised 2867½, there being no change in the standards. Next sale at Truro Oct. 18, when 2469 tons will be

offered. Dolcoath, 66½ to 67; East Pool, 40½ to 40¾; South Frances, 9 to 9½; Agar, 14 to 14½.

The Home Mines Trust are inviting by prospectus, which will be found in another column, subscriptions for the shares in Duchy Peru (Limited). The company is formed with a capital of 50,000£, in shares of 1£ each, to purchase for 30,000£. (of which 10,000£ is taken in cash, and the remainder in fully-paid shares), and further develop an extensive range of native silver and other lodes in the Perranzabuloe district. The prospectus, which will be found in another column, states that the chief features are—the acquisition of three large properties in the richest silver-lead producing district in England; that the silver-lead from various points has realised the extraordinary price of from 700£. to 800£. per ton, while about 5£. or 6£. per ton is considered sufficient to raise and bring it to market; that the company takes over a going concern, on which about 70,000£. has been expended (vide Report), replete with the most modern machinery, and producing large quantities of mineral; and that to make it one of the foremost mines in Cornwall, it is estimated, only a small additional amount will be required. The property has been carefully inspected and favourably reported upon by Prof. Kinnahan, of the Royal College of Science, Dublin, and Capt. P. Argall and R. and J. Nancarrow. Capt. Argall says the lodes produced 70 tons of blende per fathom, and that during the last two years about 12,000 tons have been raised (equal to about 500 tons per month). Capt. Nancarrow and Dudge state, it may be reasonably expected that an equal proportion of silver-lead will be returned; basing an estimate on this the prospectus shows that the following should be the result:—500 tons of silver-lead per month at 12£. per ton, 6000£.; less working and other expenses, 3000£., leaving a profit per month 3000£., or 36,000£. per annum; so that allowing liberally for all contingencies—say, 11,000£., the result shows a profit of 25,000£., equal to a dividend of 50 per cent. It is added that it may also be reasonably expected that valuable deposits of native silver will be met with, which would considerably enhance the profits.

Devon Great Consols shares have been firmer during the week at 3½ to 3¾. The monthly sampling of ore is reported at 836 tons. The lode at Watson's part of the mine presents a very promising appearance, where important discoveries may be expected, and should this take place, it will be the means of opening out a new mine in this portion of the company's property. Some rich ore is now being brought to surface from this part of the mine.

Devon Great United shares are quoted ¾ to 1¼, and very few are offering. The important discovery at the 120 fm. level, as will be seen by the manager's report, is valued at between 6 and 7 tons of rich copper ore per fathom, and is in a fine channel of killas, similar to that where the rich deposits of copper ore were laid open in Devon Consols and other mines.

Drakewalls have been dealt in during the week at 6s. to 8s., satisfactory progress being now made in clearing out the mine to the 90 fm. level, and every effort will be made to carry on this work to the bottom of the mine, or 102 fm. level, where it is expected rich tin ground will be opened out, and returned at a good profit.

Gawton, ¾ to 1; in reply to enquiries by a large shareholder in the mine, Mr. Moses Bawden, the manager, writes:—"You will doubtless have seen my reports monthly in the Mining Journal, and I am pleased to say that all I have stated is being borne out by actual results, and even a small discovery of copper ore would place us in the Dividend List. We must push east and sink to deeper levels, and I am fully persuaded we shall be repaid the outlay with profits."

South Devon United are reported to have been dealt in at ¾ to 1, owing, it is thought, to the great improvement in Martin's shaft reported last week, and confirmed in the agent's report this week, as continuing to look well, the lode being 5 to 6 ft. wide, and valued at 18£. per fathom.

South Frances, 9½ to 9¾; the several shafts are being pushed down, and it is expected that at the next levels some rich sections of tin ground will be opened out, from which it is hoped good profits will be paid to the shareholders. A correspondent writes:—"It is of the utmost importance that the manager and staff under him should give daily attention to the interests of the company in seeing that these shafts and levels are opened out with expedition, while at the same time practising every economy in obtaining the best quality of materials, whether coal, iron, steel, &c. The present financial condition of this mine having been attained only at the expense of shareholders in providing the necessary means to put the undertaking in the position it now is."

West Wheal Seton, 9 to 9½; the agent reports that the lode in the shafts in sinking below the 216 ft. level, and 7 fms. below this level, is worth, for 12 ft. wide, 80£. per fathom. There appears, says a correspondent, to be a general opinion among shareholders that at the forthcoming meeting a call should be made sufficient to clear off all liabilities against the mine up to the day of meeting.

Asia Minor, ¾ to 1; satisfactory advices continue to be received from these mines. Bills of lading have been received of a further shipment of 54 tons of silver-lead ore.

Richmond, 5½ to 6½; the week's run was 20,000 from 308 tons of ore with one furnace. During the week the refinery produced doré bars to the value of 15,000£. The superintendent for the week ended Sept. 10, reports that in the 300 level during the week have explored under south-east edge of the cave taking out some ore, present face in red line. The 300 south-west drift has been run 13 ft. by hand-drill. Total 294 ft. In broken limestone. The 1050 rise south from above has been extended 25 ft., perpendicular. Total 59 ft. Through crushed limestone and ledge matter, face in ledge matter. The 1050 south intermediate drift from north-east drift from rise has been run 12 ft. Total 12 ft. In broken limestone commencing 105 ft. in from the rise to 900 level.

Ruby and Dunderberg, 17-16th to 19-16th; the weekly report advises good progress in the incline below the 150 ft. level, it having been sunk 9 ft. in ore of a much better quality than that lately mined in the 150 ft. level. This part of the mine is being opened out as quickly as possible, as the remaining ore in the upper levels is of low grade. Sixteen tributaries are at work at the Dunderberg Mine extracting the usual quantity of ore, and the tunnel at the Lord Byron is progressing steadily.

California Gold, ¾ to 1; the mill run this week was 500 tons; yield 1000£., smelting are sales 102£., total 1102£. The usual weekly report has been delayed in transmission.

Kohinoor and Donaldson, ¾ to 1; the usual weekly report has not yet been received, having been delayed in transmission.

In Lead Mine Shares the number of transactions reported has been rather larger than last week, but the continued low price of lead, of course, prevents any important improvement. Vans are quoted 4½ to 4¾. Tankerville Great Consols, ¾ to 1; at the half-yearly meeting on Wednesday the Chairman called particular attention to the financial requirements of the company to enable them to sink the various shafts and develop the mine in a vigorous manner, as recommended by the manager, who expects great results in the future. The remainder of the 10 per cent. preference shares are to be forthwith issued. The last four months' sale of lead and blende ores amounted 8145£. 10s., and the cost of labour and materials at the mine amounted to 8674£. 12s. 9d., less charged to capital expenditure, 511£. 18s. 1d. Deducting this last amount, the expenditure at the mine is 8162£. 14s. 8d.; so that it would appear, according to this statement, the mines were about paying their way. To sink the several shafts, provide extra rock-boring machinery, &c., additional capital is necessary in order to bring the mine to a dividend state.

Roman Gravel, 7 to 7½; several transactions have been reported during the week. The half-yearly general meeting, particulars of which appear in another column, was held on Thursday, when it was stated that this extensive run of mines continues to look as well as at any former period. The 80, 95, and 110 fm. levels, driving south into the long run of ore ground, continue highly encouraging, being valued at about 10 to 11 tons of lead ore per fathom, and where in the direction driving south the rock-drills are making satisfactory progress. The shareholders expressed their great disappointment at the continued low price of the mineral, and suggested to the directors whether or not some means could not be devised to protect the interests of the company pending some improvement upon the miserable price at present paid by the smelters. It was also suggested that the lords should come forward and lend assistance by a liberal reduction of royalties, seeing the enormous expenditure incurred by the company in providing the extensive plant and machinery for the development of the property during the past few years, and by which the lords have been paid heavy dues. The manager gave a satisfactory account of the property.

Leadhills, 2½ to 3¼, and business being transacted. At the meeting reported in another column the proceedings show the highly satisfactory financial condition of the company, as well as the progress made in the development of the mine, and the improvement effected in dressing and smelting operations. In addition to the dividend of 3s. per share (3000£.), paid in August, 1882, and a further dividend of 1s. per share (4000£.), paid in June last, the directors

have now declared a dividend of 3s. 6d. per share (3500£.) Since the meeting of shareholders two important discoveries of lead ore have, it is understood, been made in sinking the shaft and driving the bottom level, valued at 6 to 7 tons of lead ore per fathom.

The Schwabs Gully Diamond Mining Company's (De Beer's Mine Kimberley) statement for the fortnight ending Aug. 10, shows that the quantity of blue ground hauled during 11 days was 1759 loads; washed in six days, 1273 loads; on the floors at that date, 17,387 loads. Diamonds to the extent of 1097½ carats (valued at, 1565£.) were found during the fortnight. The total working expenses were 1296£. 4s.

Mr. Justice Butt has appointed Mr. A. Cooper, of Cooper Brothers and Co., and Mr. P. Whinney, joint official liquidators of the Mutual Society, in place of James Waddell. It appears by a circular issued by the official liquidators, that so far as they have been able to present to ascertain, the funds of the society are intact.

Vice-Chancellor Bacon has appointed Mr. S. Lovelock official liquidator of the Duplex Electric Light, Power, and Storage Company in place of William Waddell. The Queensland Investment and Land Mortgage Company directors invite tenders for the issue of balance of 150,000£. Four per cent. Debentures. The dividend of the company has been regularly paid since its inception, and the rate for the past two years has been 12½ per cent. per annum. The certificates for the new shares will be exchanged for the allotment letters and bankers' receipts at their offices on and after the 8th inst.

The offices of the London Edinburgh and Glasgow Assurance Company have been removed to more commodious premises in New Bridge-street, Blackfriars.

At Redruth Ticketing, on Thursday, 767 tons of ore of 7 average produce, and containing 53 tons 9 cwt. of fine copper, were sold for 2866£. 17s., being 3£. 15s. 0d. per ton of ore, 10s. 8½d. per unit, or 53£. 12s. 9d. per ton of fine copper in the ore, and an average standard of 93£. 2s. Subjoined are the particulars of the two last sales.—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	One copper.
Sept. 20...	2221	...	...	...	...	...
Oct. 4 ...	727	...	...	...	...	...

Compared with the last sale the standard is about stationary. The sales and amounts were.—Mellencar, 512 tons for 1467£. 17s. 6d.; West Wheel Tolgus, 140 tons for 832£. 7s. 6d.; Wheel Coates, 70 tons for 372£. 13s.; New Cook's Kitchen, 45 tons for 193£. 19s.

GAS SHARES.—The principal business in these shares, according to this evening's report of Messrs. W. L. Webb and Co., of the Stock Exchange and Finch-lane, has been:—Buenos Ayres, New (Limited), 10; ditto, 6 per cent. Debentures, 95 to 98; Bombay (Limited), 6; Continental Union (Limited), Original, 28 to 29½; ditto, New, 69 and 72, 20½ to 20¾; ditto, 7 per cent. Preference, 27½ to 27¾; Commercial Consolidated, 247 to 249; European (Limited), 18¾; ditto, New, 14; ditto, New, 9½ to 9¾; Gas Light and Coke, A. Ordinary, 134 to 137; ditto, H. 7 per cent. Max., 143 to 144½; ditto, I. 10 per cent. Preference, 215 to 216½; ditto, 6 per cent. Debenture Stock, 148½; ditto, 4 per cent. ditto, 104½; ditto, 4½ per cent. ditto, 112; Imperial Continental, 231 to 234; Mauritius (Limited), 1¾; Oriental, (Limited), 7¾; Para (Limited), 5¼; Rio de Janeiro (Limited), 24 to 24½; South Metropolitan, A, 259½ to 271; ditto, B, 217½ to 235. Gas stocks very firm, especially the London companies, upon the amalgamation of the Gas Light and Coke with the South Metropolitan, terms of which are now published.

INSURANCE SHARES have, according to this evening's report of Messrs. W. L. Webb and Co., of the Stock Exchange and Finch-lane, been dealt in as follows:—Atlas, 18¾ to 19½; Alliance, British and Foreign, 36½ to 36¾; Commercial Union, 17 to 17½; City of London Fire (Limited), ¾ to 1; Employers Liability Assurance Corporation (Limited), 2½; Fire Insurance Association, (Limited), 1¾ to 1½; Imperial Financial, 133½ to 135; Merchant Marine (Limited), ¾; Rock Life, 8½ to 8¾; Royal Exchange, 367 to 370; Railway Passengers, 7 to 7½; Universal Marine, 6¾. Insurances dull, and little doing.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. W. Abbott, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

RAILWAY AND GENERAL MARKETS.—Referring to the course of business done to-day during official hours (11 to 3) Mr. Ferdinand R. Kirk Birch-lane, writes:—"Opening: Except the Third Preference, Grand Trunks are again higher, and this stock has been by far the most profitable of any this week. The Ordinary are 22½; Second Preference, 95; Third, 51½. Last Friday morning prices were 21¼, 92½, and 49½ respectively. Since the dividend announcement the Ordinary have advanced from 17, and the Thirds from 38. It is usual for Grand Trunks to commence to rally in September, and to go on advancing until Christmas, and it may be useful to point out that last December the Ordinary were 25, the Second 101, and the Thirds 61. Western of Canada were then over 16, and they are likely to see that price again. Home mining shares have been in good demand all the week, the public are beginning to buy freely, and prices are going up. Leadhills, 2½ to 2¾; Old Shepherd, ¾ to ¾; East Rose, 10s. to 12s. 6d.; Mounts Bay, 6s. to 7s.; Homes Mine Trust, 12s. 6d. to 15s.; Trevelyan, ¾ to ¾; Wheel Ore, 2½ to 2¾; Bratsberg, 2½ to 2¾; Organos, 8s. 3d. to 11s. 3d.; Prince of Wales, 7s. to 9s.; Colombian, 6s. to 8s.—Closing: Trust Ordinary are firm at 22½, but the Second and Third Preference have relaxed ¼. Unified have recovered to 71, and Brighton, A, to 114, after being 113½. Mexican railway, after being 1£. up, now show no change. Potosi, ¾ to ¾; La Plata, ¾ to ¾; Indian Consolidated, 4s. to 5s.; Brush Light, 2½ to 2¾; Hudson Bay, 25½ to 26.

PIG-IRON.—Messrs. W. Connal and Co. (Sept. 29) write:—"The market during the greater part of the month was dull and depressed, but within the last few days the tone has changed, and a considerable business has been done. The opening price, 46s. 11½d., was the highest paid, and the lowest accepted was 46s. 0½d. on the 21st, closing buyers at 46s. 7d. The stock in store shows an increase of 2717 tons, and now amounts to 588,062 tons, with warrants in circulation for 564,350 tons. The Middleborough market has been steady, No. 3 being scarcer. The stock in Connal and Co.'s yards there is 69,556 tons, being a decrease of 1931 tons, and there are warrants in circulation for 63,292 tons.

TIN AND LEAD.—Messrs. HENRY ROGERS, Sons, and Co. (Oct. 4) write:—"Attention has been lately invited to the increase in the world's supplies and the small expansion of European consumption. Such statistics are absolutely misleading unless account be also taken of the recent stride which American consumption has taken. The net result of the relative progress of supplies and demand during the first nine months of 1883, would seem to be that large as is the increase in the Straits production, it has only served to prevent any further fall in the total stocks of the world. Some think that the position being thus balanced, tin ought barely to maintain present values later on, but there are but few who do not concede that the peculiar position of our London stock may necessitate a very sharp rise meanwhile. Our landed supply on Oct. 1 was 3934 tons, and some dealers assert that nearly 3500 tons of this is firmly held off the market by investors, leaving only some 500 tons at most for the daily turnover of the trade. Orders for Spanish lead were eagerly sought at 12½. 6s. for the greater part of September; but just at the close the pressure to sell resulted in 12½. 2s. 6d. being accepted. English we quote 12½. 8s. 9d. to 12½. 11s. 3d., and producers are very reluctant to follow the market, hoping that the long expected change for the better must take place before long.

TIN.—Messrs. FRENCH and SMITH (Oct. 4) write:—"The consumption in America is reported to be rapidly increasing, estimates from that quarter giving the deliveries of last month from 1200 to 1400 tons. Large sales have been made here for forward delivery, which appear out of proportion to actual shipments. On the 27th ult. the Dutch Trading Company sold 22,382 slabs Banca at average 57½¢; 4100 slabs Billiton at average 56½¢.

GOLD AND SILVER.—Messrs. PILEY and ABELL (Oct. 4) write: The amount of gold sent in to the Bank during the week consists almost entirely of sovereigns, the value being 87,000£. On the other hand, withdrawals of this coin to the extent of 180,000£. have taken place in the same period, and have been sent to Egypt and Lisbon. The Spanish has brought 43,270£. from the Cape, the Iberia 24,000£. from Australia, and the Neva 38,870£. from Buenos Ayres. The P. and O. steamer takes 81,000£. to Alexandria, and 25,000£. to Bombay. The silver market for bullion has been tolerably firm during the week at 50½¢, at which rate consignments from America were placed. The price improved yesterday ¼¢, owing to an increased demand for India, consequent on a rise in the rate of discount there, and 50½¢ is now the quotation, and the silver by the Aconagua has been placed at that rate. We have received since our last 71,970£. from New York, 32,000£. from the Pacific = 103,970£. The Medway takes 8990£. to the West Indies, and the P. and O. steamer 66,000£. to Bombay.

MEXICAN RAILROAD ENTERPRISE.—The present railroads in Mexico are portions of the original plan of a national railroad system, which was to consist of three trans-continental east and west and two north and south trunk lines for the country north of the capital city. These trunk lines belt, says the New York Financial and Mining News, the Republic from Tampico to Mazatlan, from Tuxpan to San Blas, and from Vera Cruz to Manzanillo. The southern system provides for another trans-continental route from the city of Mexico west to Acapulco. The north and south lines strike out from the capital towards El Paso and Laredo, where they connect with the United States system. These plans give every State in Mexico, except the two small and remote States of Campeche and Tabasco, one or more lines, and, more important, gives each one direct railway communication with the capital. Altogether the American companies building railroads in Mexico have put over 860,000,000 in that country, and have constructed over 1600 miles of completed road. The present mileage includes 1791 miles of American-owned track, of which the Mexican Central owns 839 miles, the Atchison, Topeka, and Santa Fé, 265 miles; the Sinaloa and Durango, 38 miles; the Huntington, 73 miles; and the Mexican National, which is narrow gauge, 625 miles. The English lines consist of 353 miles, and the Mexican roads 635 miles.

SPANISH COPPER.—The statutory meeting was held at the offices yesterday (Colonel Money, C.B., in the chair), but there was a very small attendance. The chairman stated that the leases of the company's properties in Spain had been properly registered in the company's name. He had only to add that the manager at the mines reported that he had reached the mineral at San Vicente, and was

commencing to make copper precipitate. It was also mentioned that a steam-engine and other machinery for each mine was in course of shipment.

BRATSBERG.—We understand that for the next cargo of copper ore to arrive a higher price has been offered than was given for the late sales. This is satisfactory to the company, as also an indication of the firmness of this metal.

TANKERVILLE.—At the general meeting held at the mines on Wednesday there was a strong feeling expressed relative to the holding back of some of the shareholders from subscribing for their proportion of the preference shares, it being absolutely necessary they should do so to enable the mines to be worked properly.

MONKSTON MANGANESE.—This mine is opening out splendidly, and quite equal to the expectations of the most sanguine. The miners say that a vast body of manganese is laid open between the 20 and 30, sufficient to give many years' working. The company have now about 300 tons of marketable ore for sale.

GOBBETT TIN MINE.—History is likely soon to repeat itself in this grand old tin mine. A splendid lode, 10 ft. in width, which has only been operated upon to the depth of 20 ft. by ancient workers, will in a few days be cut at 90 ft. deep, and miners who know the property are willing to work it at a tribute of 6s. 8d. in the 1£. A very rich lode, it is expected, will be found.

ST. JUST UNITED.—At the meeting on Tuesday last the accounts showed a profit of 140£. on the 16 weeks' working, having sold 66 tons 3 cwt. of tin for 12 weeks' raising. The Cream Pot lode, in a winze sinking below the 140, is reported to be worth 120£. per fathom; and at the 150 end, driving east and west below this winze, is worth 50£. per fathom.

EAST LOVELL.—At the meeting at Helston on Saturday last the accounts showed a balance against the mine of 1607£. 11s. 2d. A call of 30s. per 2048th share was made.

HONOUR TO A GEOLOGIST.—H.M.S.H. the Prince of Mantua and Montferrat has been pleased in Council to confer upon the Rev. D. Honeyman, D.C.L., F.R.S.C., the Mantua gold medal; and to add his name to the long roll of worthies ancient and modern—"For geological research and excellence of arrangement in the Canadian Department of the International Fisheries Exhibition" now being held at South Kensington.

C. PASS AND SON, BRISTOL,

ARE BUYERS OF
LEAD ASHES, SULPHATE OF LEAD, LEAD SLAGS,
ANTIMONIAL LEAD, COPPER MATTE, TIN ASHES, &c.
and DROSS or ORES containing
COPPER, LEAD, AND ANTIMONY.

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HANDLES
MANGANESE, BARYTES, SPARS, AND ALL ORES on SALE
or PURCHASE.

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(Associate Royal School Mines),
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Assays or Complete Analyses made of Copper, Silver, Lead, Zinc, Tin, and
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of Lime, Tin, Lead, Iron, Manganese, and Manganiferous
Iron Ores.

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MINING, CIVIL, AND CONSULTING ENGINEERS, AND CERTIFICATED
COLLIERY MANAGERS.
Are prepared to INSPECT, REPORT UPON, VALUE, or TAKE THE MANAGE-
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In the Laboratory Metals and Alloys are examined mechanically with the aid
of powerful Testing Machinery, as well as Chemically.
Extraction and Manufacturing Processes investigated, and Assays and Analyses
made.
A few Free Entries to the division of studies (day or evening) are obtainable
through the City and Guilds Institute.

MR. W. B. COBB, 29, BISHOPSGATE STREET,
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PAYING 10 AND 20 PER CENT. CERTAIN.
Immense profits and large dividends. See Circular, price 1s.
Speculative business opened in Mexican Rails and all leading Stocks of the day.

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SHARE DEALERS, 13, MOORGATE STREET, LONDON, E.C.
BUSINESS in all DESCRIPTIONS OF STOCKS, MINING and other SHARES.
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MR. W. MARLBOROUGH, STOCK AND SHARE DEALER,
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Can SELL the following SHARES at prices arranged:—
75 Almaden, 10s. 3d. 20 Home Mines Trust, 10 Roman Gravel, 66½.
25 Birdseye Ck., £1 10s. 25 Kapanga, 8s. 25 South Devon, 11s. 3d.
20 Bratsberg, £2 8s. 6d. 75 Kapanaga, 4s. 40 Tankerville, 3s. 3d.
20 California Gold, 14s. 10 Leadhills, £2 17s. 6d. 75 Northridge Con., 3s.
58 Corporation of South 40 La Plata, 14s. 20 South Caradon (Ltd.),
Australian Copper. 3s. 9d. pm. 3s. 9d. pm.
40 Callao Bis, 7s. 25 Mounts Bay, 8s. 20 South Devon, 11s. 3d.
25 Chile Gold, 14s. 6d. 20 Marke Valley, 8s. 40 Tankerville, 3s. 3d.
75 Chontales, 6s. 6d. 50 Nouveau Monde, 6s. 6d. 20 Tresaven, 2s. 6d.
20 Colorado, £2 5s. 25 New Emma, £1 8s. 9d. 10 Tolima A, 4s.
40 Consolidated, 4s. 6d. 25 New Trumpet Con- 20 do B.
2 Dolcoath, £27½. 25 Organos Gold, 11s. 6d. 5 Van, £4 15s.
20 Devon Consols, £23½. 25 Old Shepherds, 15s. 3d. 5 Victoria Gold.
40 Dev. Friendship, 3s. 9d. 20 Orita, fully pd., 12s. 6d. 50 West Crebor, 4s. 6d.
25 East Blue Hills, 5s. 5 Panuclillo, £8 12s. 6d. 25 West Kitty, £14½.
25 East Caradon, 7s. 6d. 100 Port Phillip, 3s. 25 West Phoenix.
25 East Rose, 12s. 6d. 40 Prince of Wales, 8s. 8d. 20 West Caradon, 9s.
20 Frontino, £1 12s. 6d. 20 Potosi, 7s. 6d. 10 Wheel Crebor, £2 18 9
20 Gold Coast, 14s. 6d. 25 Parya Corpora., 4s. 3d. 25 Wheel Jane, 5s.
15 Gunnislake (Clitters), 22½. 20 Pestaena, 3s. 6d. 10 Western Andes Gold,
£2½. 20 Ruby, £1 11s. 3d. £2½.
15 Great Holway, £4½. 5 Richmond, £2 2s. 6d.

VICTORIA GOLD (Venezuela).—I strongly recommend the immediate purchase of these shares for an important rise.
SELECTED DIVIDEND-PAYING FOREIGN MINES, making large profits—
WESTERN ANDES net profit for June, £1200; July, £1300. Next dividend,
15 to 20 per cent. Circular with full particulars now ready, price 1s., free to
clients.
PURCHASES FOR FORWARD DELIVERY AT SPECIAL PRICES ON
RECEIPT OF DEPOSIT OF 20 PER CENT.
BUYER of Tamar, Carn Camborne, Collacombe Consols, and Colombian.
BANKERS: ALLIANCE BANK (Limited).

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Sept. 29—Wemyss	...	60	£ 2 8 6	Bagillt Company.
—Frongoch	...	100	3 12 6	Crown Spelter Co.
—ditto	...	50	2 0 6	Villiers Spelter Co.
Oct. 2—Cwmystwyth	...	45	3 15 6	Crown Zinc Co.

THE MASON SCIENCE COLLEGE, BIRMINGHAM.

SESSION 1883-84.

COAL MINING DEPARTMENT.

During the ensuing Session a series of Special Lectures upon the Chemistry and Geology of Coal Mining, Mechanical Engineering as applied to Coal Mining, and the Theory and Practice of Coal Mining and Colliery Management, will be delivered by the Professors in Chemistry, Geology, and Engineering, and Mr. John Brown, M.Inst.C.E., F.G.S., the Lecturer on the Theory and Practice of Coal Mining and Colliery Management.

The Course will extend over two years, and will embrace about seventy Lectures in all. These will be delivered upon the evenings of Monday in each week, from Four to Six P.M., or at such other hours as shall be eventually found to be most convenient, during the first term (October to December), and from Four to Five P.M. during the second and third terms (January to June).

The opening Lectures on the Chemistry and Geology of Coal Mining will be delivered by Professor Tilden and Professor Lapworth on Monday, the 22nd of October next, from Four to Five and Five to Six P.M.

Fee for the first year Course, £4 4s.

Fee for the second year Course, £3 3s.

Or for each single series of ten Lectures, £1 1s.

These Lectures are intended to meet the requirements of candidates for Certificates of Competency, Proprietors of Coal Mines, Mining Engineers, Mine Managers, and others interested in Coal Mining and Colliery Management. The attention of Candidates preparing for Mining Certificates is especially called to this Course of Lectures, which includes all those subjects directly connected with Coal Mining and Colliery Management in which they have to undergo examination.

GEO. H. MORLEY, Secretary.

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Notices to Correspondents.

INSTITUTIONS FOR THE IMPROVEMENT AND STUDY OF MINING IN THE UNITED KINGDOM.—Several correspondents having enquired for a list of the above, secretaries or members are requested to forward to the Editor names of the institutions to which they belong, and brief details, that a list may be published in the *Mining Journal*. Particulars should be sent before Oct. 31.

NATIONAL SOCIETY FOR THE WORKING OF MINES—"H.S." (Manchester).—It was a French concern, but we do not know whether the shares were ever placed. It is probably defunct, as the last heard of it was several years since. A draft on the company was sent back, and letters addressed to the company's offices in Paris were returned through the dead letter office, marked "parti." There was a long string of names connected with it, but it is questionable whether any of the persons included in the list incurred any pecuniary responsibility. We do not know why the letters mentioned should be dated from Paris, and posted elsewhere.

FORM OF MAGNETS—"J. L. K." (Stevenage).—There are differences of opinion as to the merits of solid and hollow magnets, but Holts, than whom no better authority need be desired maintains that solid steel bars do not form so good permanent magnets as tubes, because the core acts as an armature joining the two poles. In experimenting to test his hypothesis he magnetised rods and tubes to saturation, and found that the magnetism of the tube showed an excess of more than 50 per cent. After waiting six months he subjected the same magnets to new tests, in order to find which retained the magnetism best. He found that the magnetism of the solid was to that of the hollow magnets, in one case as 1 is to 2½, and in another as 1 is to 3 nearly. The Gülicher form of arc-lamp is probably the most simple, and the cost of manufacture in its cheapest form must be comparatively trifling.

MINERAL CORPORATION OF GREAT BRITAIN—"H.S." (Manchester).—Long since defunct. It went into liquidation, but we never heard of any dividend to creditors or shareholders, though we should have been likely to have heard of the former.

MICA AND STEATITE.—The names and addresses of large foreign dealers in mica and steatite are required by one who is in a position to place large orders for same at low prices.—E. G.: Westminster.

NATIONAL UNION INVESTMENT COMPANY.—I should be obliged if some correspondent will inform me through the *Journal* if the affairs of the National Union Investment Company (Limited) are settled up, as at the time they presented a petition to wind up the concern I was a creditor, and as I have written the secretary several times and cannot get an answer from him I should be obliged if you would enlighten me in the matter?—PETER.

STATUTE.—Can any reader of the *Mining Journal* tell me the nature of the mineral known among the Germans by this name. I do not see the name in any English book on mineralogy that I have seen.—ESQUIRE.

Received.—"O. P. S." (St. John's Wood): Any reply which you have to make to "R. C. D." must be sent in a form in which it can be published. The names and addresses of those whose communications appear in the correspondence columns are never given. All replies thereto, however addressed, are opened by the Editor, and inserted or destroyed at discretion.—In Ferrorem—"W. R. W." (Newquay).

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, OCTOBER 6, 1883.

RAILWAYS v. CANALS.

The battle of the gauges having long since been set at rest, it needs no very keen perceptive faculty to predict that before very many years have elapsed, the battle of railways v. canals for the carriage of minerals and heavy goods will have to be fought with almost equal tenacity. The commerce of the country has grown to such enormous proportions, and the railway freights are so excessive, that trade is considerably hampered by the want of greater and cheaper facilities of carriage. We may rest assured that the railway companies will spare neither exertions nor expense in their endeavours to perpetuate the monopoly which they possess; and whilst they can scarcely be blamed for thus endeavouring to protect their own interest in this respect, it is only right and fair that traders should have the greatest possible facilities in the carriage of goods, and that this carriage should be upon the lowest terms. The threatened competition with railways by canals is only the outcome of the questionable policy hitherto pursued by our great railway companies. They have hitherto exacted the utmost farthing in the shape of freights, and have refused to give more facilities for the carriage of goods. If the various railway companies would only read the signs of the times they would, wherever possible, lay down a separate or special goods line, thereby securing greater safety, quicker dispatch, and reduced fares, and, at the same time, it would prove one of the

most powerful arguments that they are willing and able to provide for every possible contingency. Some of the great trunk railways have already adopted this course, but there must be a general movement in this direction if the ever-growing demands of the great manufacturers and of commerce generally are to be satisfactorily responded to.

The late official enquiry by the Committee of the House of Commons as to railway rates and fares had a most salutary effect in more directions than one. It proved, beyond all doubt, that in many instances some of the railways charged higher rates than the maximum allowed by their special Acts of Parliament; that these rates were even higher now than they were years ago; that higher rates were charged for one description of goods than another; and that lower rates were charged for imported goods than for home produce. Whilst these things were proved beyond the shadow of doubt, the Commission also proved the inability of the traders, in consequence of the want of unity on their part, to successfully fight against the power and wealth of the railway companies. Hitherto the only successful weapon has been competition, and some remarkable instances were cited before the Royal Commissioners of the effect produced by the opening up of rival means of the carriage of goods. The projected canal from Liverpool to Manchester would unquestionably work quite a revolution in the carriage of goods throughout the whole route, and even the mere starting of the project has compelled the railway companies between Oldham and Liverpool to make a reduction in the carriage of goods to the extent of 25 per cent. Some idea of this reduction may be gleaned when it is stated that Oldham alone pays something like 100,000l. a year in railway rates, so that this reduction will save the cotton spinners of that town the very considerable sum of 25,000l. a year. Other trades and manufacturers would receive equally substantial boons in the shape of reduction of freights were the canal carried into effect. Traders, therefore, in the Midland districts will be glad to hear that, although defeated last year, the promoters are not discouraged, but that, in all probability, they will apply next session for powers to construct the canal; and as they have modified some of the provisions, and are still backed up with public confidence and approval, they have now far better prospects of success.

The opinion is gaining strength every day that, for the carriage of heavy goods, canals possess advantages over railways besides that of mere cost of transit. Of course, there are many complaints as to the present working of canals, and these grievances were prominently paraded before the late Royal Commissioners; but the granting of through rates on these canals, as recommended by the Commission, would probably soon bring about a remedy. Those who are most competent to form an opinion believe that the carriage of goods per canal need not exceed 3d. per ton per mile; but railways cannot carry goods, as at present conducted, at anything like that figure—indeed, double the price would be a most acceptable figure for the great bulk of the manufacturers.

The fact that boats are able to stop almost anywhere gives canals a decided advantage over railways. These facts seem to be far more generally recognised in commercial circles now than a few years ago; and we may expect to find the growth of canals far more rapid than hitherto. In addition to the projected canal between Liverpool and Manchester, Mr. F. OWENS, of Hayes, Middlesex, has launched before the commercial world what is known as "The Great Western Maritime Ship Canal," which, however, would have no connection whatever with the Great Western Railway besides that of competition. This project consists of cutting a ship canal connecting the Bristol and the English Channels, and which, if completed, would not only materially shorten the sea distance between the coal basin of South Wales and the Metropolis, but by breaking up the monopoly now possessed by the Great Western Railway Company bring about a substantial reduction in rates, of which, of course, the public would reap the advantage. Mr. OWEN has estimated the cost of this canal at upwards of 3,000,000l. sterling; but large and almost startling as this amount appears, the sanguine projector quotes statistics to prove that the mere carriage of coals from the Principality would pay no less than 12 per cent. upon the outlay. Although we may not be able to endorse all the views of the promoter of this scheme there are no engineering difficulties in the way, and far more chimerical schemes have ere now been carried to a successful issue.

Our continental neighbours seem to realise the value and utility of these canals far more than in England, and they are being developed with a rapidity never before known. The latest reports from France is to the effect that very large sums have been voted for the extension of inland navigation and the improvement of maritime ports, 32,500,000 frs. have been assigned for works in the ports and harbours for next year, and 20,000,000 frs. for canals. The most important canals are the Central Canal, the estimated cost of which is 1,500,000 frs.; Eastern Canal, about the same amount; that connecting the Marne and the Saône, estimated at 4,000,000 frs.; that to connect the Marne and the Rhine at a cost of 800,000 frs. It will thus be seen that the advantages of canal carriage is becoming more and more recognised by the commercial public generally, and will within a few years be a far more important factor than at present in the carriage of minerals and heavy goods. If the construction of a few

important waterways between the great manufacturing centres were carried out the railway monopoly now existing would be effectually broken up, a substantial reduction of fares would follow, trade relieved of much that now hampers and restricts it, and another legitimate means afforded for the profitable employment of capital.

THE MINERS' WAGES AGITATION.

The miners in North Staffordshire have been on strike for upwards of 20 weeks against a reduction of 10 per cent. in their wages, 4000 being now out, yet an agitation is going on, especially in the Midland field, for an advance of 15 per cent.; in this the North Staffordshire men have also agreed to join. As usual, the movement commenced in the South Yorkshire district, where the coal miners are about the best paid in the kingdom, and have had an exceptionally good time during the last 12 months. The ground for the demand is the alleged improvement in the coal trade, and the fact that prices are 2s. per ton higher than in June last. But this is really not the case, and has received a most emphatical denial from several colliery owners, whilst the assertion made by one of the miners' leaders that all collieries have paid dividends this year has also received an unqualified contradiction. The same person also stated that last June the coal of the Colliery Owners' Association realised from 16s. 6d. to 17s. 6d. per ton in the London market, whilst the present prices were 18s. 6d. to 19s. 6d. per ton. This is one of the statements relied upon for an advance of wages; but it tells mostly against the men when the figures are analysed. Taking the South Yorkshire district, to which allusion was made, it appears that the carriage rate to London for coal is 8s. 3d. per ton, truck hire 9d., and sidings 2d., and if to these sums 3s. are put down for carting and putting into sacks, there is a total of 12s. 2d. for conveyance alone from the pits to the consumer, so that when the price realised was from 16s. 6d. to 17s. 6d. per ton, there must have been a considerable loss to the colliery owners, and even when 18s. 6d. to 19s. 6d. were realised there could only have been a bare profit. Another argument brought forward in favour of increased wages was that Messrs. Newton, Chambers, and Co., had this year paid a dividend of 6½ per cent. But it was not stated to the men that the firm or company named was largely engaged in the iron trade, having the largest foundries in the district, and well known throughout the kingdom for gas and several other specialities, for the production of which some hundreds of men are employed. Mr. CHAMBERS, on being applied to for the advance, stated that his firm had lost money by their transactions in coal during the year, and it was pointed out that, despite their declaration, there was a dividend of 6½ per cent. A great deal, of course, was made of this, the fact of there being large ironworks being entirely ignored.

Another point was that in the report of the Aldwarke Main Company, it was stated that contracts during the present year were 1s. per ton higher than last year. But it is stated that the company realised no profit on the coal sent away in 1882, therefore an advance of 1s. a ton would leave little profit. The Aldwarke Main Company, however, is Sir J. Brown and Co. (Limited), Atlas Works, Sheffield, and the shares of the company are now at a considerable discount. Another of the miners' leaders has called attention to the fact that the Staveley Company for several years past has paid good dividends; but the point was altogether omitted that the company is about the largest in Derbyshire as regards the production of pig-iron, and has also the most extensive foundries in the county. But profits and dividends of firms or companies who own both collieries and ironworks are all attributed to the former, and that of course most unfairly. But as to the statement made at the recent delegate meeting that there had been a rise of 2s. per ton in the price of coal since June last this is simply impossible as regards the produce of our mines. As a rule, there is about 50 per cent. of large coal turned out, the remainder being nuts, riddled slack, common slack, and smudge. The Barnsley Thick coal of first quality now realises from 6s. 3d. to 7s. 6d. per ton; nuts, 4s. to 5s. 6d.; riddled slack, 4s. to 5s.; and smudge, 1s. 9d. to 2s. 9d. per ton. From these figures it will be evident that an all-round advance of 2s. per ton is, as we have stated, an impossibility, for if such had been the case then smudge must have been of no value whatever, whilst the fact is it has sold rather freely for coking purposes. But those who have started the agitation for an advance of wages lead the public to believe that there is only one kind of coal, instead of stating that only about 50 per cent. of it is such as is forwarded to the metropolitan and other markets for general house and steam purposes. The same remarks apply to the Silkstone seam, which only runs from 5 to 6 ft. in thickness, the nuts being in good request for gas purposes, now selling at from 5s. 6d. to 6s. 9d. per ton. According to statements made on the part of colliery owners the prices realised are not now more than 6d. per ton above those of the corresponding period of last year, whilst even during the present year a colliery proprietor challenges anyone to prove that a dividend has been declared on the part of one-tenth of the collieries in the West Riding. Admittedly the price of coal is rather better than a few months ago, and miners have reaped the advantage of working six days a week, and showed no signs of discontent until the paid leaders took the question up, and commenced a by no means formidable agitation. The colliery owners, however, appear, to be now more united than previously, and are evidently determined to oppose with all their power a demand for increased wages, not warranted by the prices which coal is now realising in the home and foreign markets.

MINING ENTERPRISE IN CANADA.

The development of the mining industry in the various provinces of the Dominion appears to be making satisfactory progress, and the Canadian Mining Review, which has recently been established in Ottawa to promote the interest, gives evidence of great care and judgment on the part of those entrusted with its management. The phosphate mines are yielding large returns, and although the market is at present dull it is not thought at Montreal that the depression will be of long duration. For some years back repeated rumours have been afloat to the effect that gold and silver bearing quartz had been discovered in the township of Wakefield. But a few days ago a local journal gave Mr. Vennor credit for having discovered gold and silver in paying quantities in quartz in the third range of the above-named township. That gold and silver-bearing quartz has been found in the locality there is no reason to doubt, but that it occurs in paying quantity will remain a subject for speculation. Careful examination of the location and the quartz referred to has convinced scientific men that the precious metals are not to be found there in paying quantities.

With reference to the Geological Museum of Canada it is remarked that during the past three months the field geologists attached to the Geological Survey, one of the most important branches of the Government service, have been steadily engaged in exploring and examining the mineral sections of the Dominion, and in noting the progress made in the mining districts where active operations are being proceeded with. A large and most interesting variety of specimens have been forwarded by them to the museum at Ottawa, and will shortly be exhibited for public inspection. In addition to the specimens of economic minerals, there are many that have no commercial value, but are wonderfully interesting to the student of geology, some of which are very beautiful and valuable as curiosities. The museum continues to attract a large number of visitors, and, as the official book shows, there have been no less than 3158 names registered from June 1 to August 24 inclusive, being an important increase on the number registered during the same period last year.

Manganese deposits of a very superior quality have been discovered and tested by Mr. R. J. Stephens, near Walton, Hants County, Nova Scotia. It lies in the same formation as the ore of the Tenepace Mine, and is distant from it about eight miles. In Hants County an irregular annual export of manganese has been maintained, amounting since 1861, to about 2000 tons, valued at \$110,000. Formerly extensive operations were carried on at Tenepace, Walton, and Pembroke, but are now confined to the first-mentioned locality. The Hants County ores are of a very high grade, yielding 90 per cent., and upwards of peroxide, and being almost free from traces of iron

are valued by the flint glass-maker, as glass is apt to contract a greenish tinge from the presence of iron. The manganese yielding districts in Hants County which gives promising indications is over 150 square miles in extent, and the absence of workings may be traced not to a deficiency of the ore, but to a want of enterprise and capital. Everything about the mine and mill of the Oxford Gold Mining Company is in a satisfactory condition. The late scarcity of miners during the fishing season somewhat retarded operations, but they are now more plentiful, and opening work on the different leads will be proceeded with thoroughly and vigorously. The face of the east bluff is 25 ft. high, and enough ore is in sight for three months' work. The milling plant on the property is very complete, and is pronounced the best in the province, and equal to any that is in use elsewhere.

THE MASON COLLEGE BIRMINGHAM.

The session was opened on Tuesday by a meeting for the distribution of prizes. Alderman R. CHAMBERLAIN, the bailiff, presided. The prizes having been presented, Alderman Chamberlain said it was usual on that occasion for the bailiff to give some little account of the work that had been accomplished in the College, and of what was likely to be done during the ensuing session. During the past session they had had 366 students, compared with 251 in the year before, and 95 in the year before that, and he was glad to be able to add that, though they were not very far advanced in the present session, they had seen sufficient to lead them to believe that the progress would be no less rapid than in the past. They had been enabled to arrange—in a great measure through the energy and spirit of Professor Lapworth—for a course of lectures on coal mining. The lectures would be given by the professors of chemistry, engineering, and geology; and Mr. J. Brown, who was very well known in the district as an eminent mining engineer, would give the practical course on mining engineering. These lectures would last two years, and there would be 70 of them in all. The course would be suitable for candidates for certificates of competency, mine managers, mining engineers, colliery proprietors, and others interested in mining. They would all see how great a good might be done in such a district as this by such a course of lectures, and those connected in any way with the College could not but feel a pride in the fact that the College did not rest content with what it had done, but was endeavouring to extend its work, and render it more useful to those for whose benefit the College was founded. The inaugural address of the course would be delivered on Oct. 15. Professor Poynting would have a class on the applications of electricity. He commended these lectures to those who were interested in the recent remarkable developments of electricity, and he thought the matter would be taken up warmly in Birmingham, where the manufacturers were always ready to adapt themselves to the requirements of the day. The number of changes in the staff was smaller than was reported last year. Dr. Morris had been appointed to a post in the chemical laboratory of Worthington and Co., Burton-on-Trent, and Mr. Thomas Turner, F.C.S., a distinguished student of the Royal School of Mines, had succeeded him. Mr. J. T. Riley, B.Sc., had been appointed lecturer in mathematics and mechanics at the Bradford Technical School, and Mr. Ernest F. J. Love, B.A., took his place at Birmingham. In the library they had now over 14,000 volumes, as compared with 12,000 that time last year. This great increase was chiefly due to one of the trustees (the Chairman of the library committee), who had presented upwards of 10,000 volumes. He was also glad to announce that the professors had arranged to give a course of six lectures, which would be open free, or at a nominal admission fee, to the public, and tickets for which would be distributed to some of the larger manufacturers in the town to be given to their workpeople. (Applause.) The desire of the professors and the trustees was, as far as possible, to extend the advantages which now belonged to the students to others, and to stimulate a thirst for knowledge, so that either by the aid of scholarships or otherwise those who showed an aptitude for the subjects dealt with might be enabled to carry their studies still farther. (Applause.) They had had constructed new laboratories for botany and for zoology, and a new lecture theatre. He regretted to say that all these things had not been accomplished without getting into debt. The trustees were anxious to develop the work of the College to the utmost, but unfortunately the funds at their disposal would not allow of their doing nearly so much as they would like to do, and the time was not far distant when they would have to make some appeal to the town to supplement the generosity of the founder. Like the founders of many other great schemes, Sir Joseph Mason did not anticipate what a vast opportunity for spending money usefully would be afforded by the foundation of the College, and when he died they were only beginning to realise what would be required to fully carry out the work.

University Training in Provincial Colleges was treated of in an address by Prof. Poynting, in which he said that the arrangement between Mason College and Queen's College enabled the former to take a part in providing a thorough training for medical students; and he hoped they might look forward to a time when there should also be in Birmingham a school of law, as there was at London and Manchester. Perhaps the provincial colleges found their greatest difficulty in their literary and purely scientific departments. The difficulty was in obtaining students who would go through a thorough training. But now that we were thoroughly convinced of the evils arising from the neglect of secondary education, the greatly increased demand for thoroughly trained teachers, specially qualified in one or two subjects, would open a career to students. For the mercantile class a literary or scientific course of education was the best of any. It was not the men with a true university training who failed in business; it was those who had been at college, but had missed the training, who had frittered away their time without any attempt to study, and who had deliberately refused the training offered to them. The solitary student, no matter what distinctions and prizes he might win, missed almost the best part of a college career. There were intellectual sympathies arising from the association with others engaged in different studies; the college societies, the college athletic clubs, and, he wished he could add, the college common room—all those features of student life which caused it to be looked back upon as a bright and happy time. The student life could not come fully developed all at once; but he thought that they at Mason College had already much of it, thanks to the loyalty to the College of their first students. It was for those who were entering on their college career to take their part in promoting that student life, and in making Mason College a true university for Birmingham.

ELECTRIC SIGNALS IN CORNISH MINES.—In connection with the Cornwall Mining Institute an interesting lecture was delivered at Redruth on Wednesday evening by Mr. Sydney F. Walker (of Messrs. Walker and Oliver), on the advantages of electrical appliances if applied to Cornish mines. He urged that the bell electric signals would be a vast improvement on the present system, that electricity might be introduced, and that telephones would prove of great benefit. Subsequently the prizes won by the students of the Redruth Science and Art Classes, which are in connection with the Miners' Association, were distributed by the President of the Mining Institute. Previous to this Mr. Chelwell, the hon. secretary, read the report, which was a satisfactory one. He prefaced the report by observing that for several years Redruth had not stood in its proper position, students having to go to Camborne for the means of studying practical chemistry. Redruth did not like to go a-borrowing or a-begging. Redruth had at last risen to its proper duty, and they now had the honour, and the pleasure, of beginning their next season in a suite of rooms, just erected, which did them credit, and which, for the size of the town, and the population of the neighbourhood, stood second to none in the country. In order to encourage the students an individual in the town thought of offering prizes to those who were so successful in the examinations as to take the Queen's prize. Mr. Henderson, previous to the distribution, congratulated Redruth upon having done so well for the young people. It reflected the highest credit upon the town that they should have such a building as the committee had been good enough to grant the institute for

the occasion of that exhibition. It was a public benefit that they should thus provide for the youth of the town, who appeared already to appreciate it, for the prizes which he had before him showed that they endeavoured to gain all the information that was offered them, and to profit by it.

THE COPPER TRADE.

During the quarter ending Sept. 30, 1883, the quantity of copper ore, the produce of Cornwall and Devonshire, sold at the Cornish Ticketing, was 10,023 tons, which contained 610 tons 18 cwt. of fine copper, and realised £32,308 18s. 6d., being equal to an average of 37 4s. 6d. per ton of ore, and 521 18s. per ton of copper in the ore. During the same period the British, colonial, and foreign ores sold at Swansea amounted to 958 tons, which contained 94 tons 13 cwt. of fine copper, and realised £3557 13s. 6d., being equal to an average of 57 11s. 9d. per ton of ore, and 561 11s. 9d. per ton of copper in the ore. The average produce of the ore sold at Cornwall Ticketings 64 per cent., whilst that sold at Swansea gave an average produce of 94 per cent. From this it will be seen that the aggregate sales by ticket were 10,981 tons of ore, containing 705 tons 11 cwt. of fine copper, realising £37,664 12s. The subjoined is a summary of the periodical sales at the Cornwall and Swansea Ticketings respectively. The ores sold at the Cornwall Ticketings were—

Date.	Standard.	Prod.	Price.	Per unit.	Tons.	Fine cop.	Amount.
July 5.	90 10	0	7 1/4	£3 17 6	108	7 1/4	1441
19.	104 2	0	8 1/4	214 0	10	3 1/4	2134
Aug. 2.	93 13	0	8 1/4	312 0	10	8 1/4	926
22.	101 3	0	8 1/4	219 0	10	6 1/4	2455
Sept. 6.	98 13	0	8 1/4	3 5 0	10	5 1/4	838
20.	97 14	0	8 1/4	3 8 6	10	10	2221
Total for the quarter					10,023	610	18
Quarter ending June, 1883					9,147	572	7
Quarter ending March, 1883					10,220	609	12
Quarter ending December, 1882					11,657	699	10

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July 5.	90 10	0	7 1/4	£3 17 6	108	7 1/4	1441
19.	104 2	0	8 1/4	214 0	10	3 1/4	2134
Aug. 2.	93 13	0	8 1/4	312 0	10	8 1/4	926
22.	101 3	0	8 1/4	219 0	10	6 1/4	2455
Sept. 6.	98 13	0	8 1/4	3 5 0	10	5 1/4	838
20.	97 14	0	8 1/4	3 8 6	10	10	2221
Total for the quarter					958	94	13
Corresponding quarter, June, 1883					1,631	220	4
Quarter ending March, 1883					1,075	88	13
Quarter ending December, 1882					2,621	284	13
Total for the year					6,285	688	3
Showing a quarterly average of					1,321	172	1
Quarter ending September, 1882					—	—	—

SCOTCH PIG-IRON WARRANT MARKET.

Mr. W. WILSON (Glasgow, Oct. 4) writes:—The warrant prices have improved on the week; an oversold market is liable to such sudden changes, especially when allusion is made to a possible restriction of production. Nothing serious is yet contemplated in that way; but the remodelling of furnaces having become a necessity with those who would compete for the advantages which science has secured, a furnace or two here and there will go out temporarily, for alteration or reconstruction. Warrants have long been depressed because of the heavy stock and the indifference of the public to iron as an investment. A return of confidence would quickly affect the price and alter the whole aspect of the Scotch iron trade. Shipments are fairly good for the week, although short of last year. A furnace has been blown out at Glengarnock, reducing the number blowing to 114. 1010 tons were put into store here last week, while 50 tons were taken out at Middlesbrough. Business was done during the past week at the following prompt cash prices:—

Thursday, Sept. 27.	Friday, Sept. 28.	Monday, Oct. 1.
46/7, 46/8, 46/9, 46/7	46/5 1/2, 46/7, 46/8, 46/7 1/2	46/7, 46/9 1/2, 46/7 1/2
Tuesday, Oct. 2.	Wednesday, Oct. 3.	Thursday, Oct. 4.
46/7, 46/8, 46/9	46/5 1/2, 46/7	46/5 1/2, 46/7 1/2, 46/9, 46/10 1/2
1883.	1882.	1881.
Price of Scotch Warrants, Oct. 1	46/8 1/2	51/9
Furnaces in blast in Scotland do.	114	107
Iron in store at this date	588,062	626,831
Shipments of Scotch pig-iron for	13,238	15,023
week ending Sept. 29	493,614	485,149
Do. since beginning of year	39/	41/9
Price of Middlesbrough No. 3, Oct. 1	117	120
Furnaces in blast Middlesbrough dist.	117	120
Middlesbrough Iron Imported at	5,900	7,485
Grangemouth, week ending	200,550	175,234
Sept. 29	222,558	185,510
Do. do. since beginning of year		

SOUTH STAFFORDSHIRE MINES DRAINAGE.—The annual meeting of the Commission was held in Wolverhampton on Wednesday, Mr. Walter Williams (Chairman of the Triumvirate) presiding. On the motion of Mr. Richard Williams, seconded by D. Groucutt, Mr. Walter Williams was re-elected Chairman of the Triumvirate for the ensuing year. The annual reports were received and adopted. Mr. R. Williams observed that when these works were concluded he supposed there would be a reduction in the present 1d. rate by which the annual cost of 8000l. or 10,000l. was defrayed. Since the committees had been abolished the Commission knew very little of the proceedings of the Triumvirate, and he should like a story of the troubles of the last year and the hopes for the future. The Chairman, in reply to the remarks by Mr. Richard Williams as to the reduction of rate upon the completion of surface works, said that great things could not be expected in the way of reduction of rates in face of the sums which, as the accounts showed, had still to be paid off, and in face of the necessary maintenance of works. One of the greatest drawbacks which the Triumvirate had to contend with was that gentlemen who were members of the Commission unhesitatingly sunk the works of the Commission. If every man would do his best to keep up the water-courses, and thus aid the surface work, it would go far towards effecting a reduction of the rates. In reply to Mr. Wilson Lloyd's remarks, the Commission were acting with strict legality in charging to the surface rates the removal expenses of water that came on the surface. Water was pumped off the surface out of the swags and into the streams. To show the utility of the surface works, he would like to say that during last month there had been 6 in. of rainfall over 7500 acres, which meant 1,120,000,000 gallons of water. All this, had it not been pumped from the surface, must inevitably have found its way into the mines below the level. He believed the surface drainage was a department which they should continue to develop to a far greater extent, in order to prevent the water from getting down into the mines. As regarded the question of levels, there were no levels proposed, suggested, or in any shape or form intended to be carried out that had not been submitted to the Commissioners at previous meetings. And in the future either as to levels or any other works the same policy of always obtaining the approval of the Commission would be pursued. With reference to the general progress of the works of the Commission, that progress was very great. Relatively speaking the amount that had to be paid was small. However, there would still be heavy charges to be met for some time to come, and it must not be forgotten that certain of the works commenced that year ought to have been begun at least a twelvemonth earlier. Although the new Stowe Heath engine had not been in operation for more than three weeks the water was lower at Stowe Heath by no less than 18 feet; mines at Merrill's Hole, which were said before to have derived no benefit from the old Stowe Heath engines, were 3 feet lower; whilst mines at Neachills had also been benefited. The district was clearly one common pound, which, at a certain level, ran from there right up to Westbromwich. In fact he was not sure whether his worthy friend the Chairman of the Sandwell Park Colliery Company would not also be advantaged if only the water rose high enough. (Laughter.)—Later on, in acknowledging, on his own behalf, a vote of thanks accorded to the Triumvirate for their services during the past year, the Chairman said that if the Commission intended to continue its confidence in himself and his colleagues as a Triumvirate, it must be unimpaired confidence. They must believe that the Triumvirate had the interests of the whole district at heart, and that no personal interests were allowed to interfere. It would perhaps be gratifying for them to hear that out of 15 engines at work in the district at

present most of them were at blast. The general work of the Commission in the past had been very arduous, but he believed that it merely required time and patience, and a little consideration on the part of the Commissioners, for the whole scheme to be completed to the satisfaction of all.

SOUTH STAFFORDSHIRE INSTITUTE OF MINING ENGINEERS.—At the usual monthly meeting on Monday (Mr. H. Johnson, jun., in the chair) the secretary read a letter from Mr. Glennie, stating that, owing to the illness of Captain Coates, the excursion to Snailbeach Lead Mines would have to be abandoned. He also reported that the professors of Mason's College had determined upon having a course of mining lectures, and they had also agreed to have a lecturer on mining and mine management. Mr. John Brown had been selected, and this would give the greatest satisfaction to all concerned. Several gentlemen had intimated that it was their intention to do all they could to assist Mr. Brown by the forwarding of models, plans, &c., calculated to promote the success of the lectures; also to forward anything strange which they found in the workings. The President said the letter of Mr. Brown was a gratifying one, especially when they recollected that it was that Institute which had done much to develop the movement on the part of the Mason's College for a course of mining lectures. They would be of the greatest use to the younger members of both Institutes in Staffordshire, and he thought it would be well if the Mason's College professors would alter the night of meeting, because Monday was the night on which the South Staffordshire and the North Staffordshire Institutes met. The secretary was instructed to write to Mr. Brown and the Mason's College professors congratulating them on the appointment, and the course adopted.

DESIGNS, SPECIFICATIONS, AND INSPECTION OF IRONWORK.

In an interesting paper on this subject, read before the Society of Engineers on Monday evening (Mr. Jabez Church, M.I.C.E., F.G.S., in the chair), Mr. Hamilton W. Pendred said that, although engineers and contractors approach each other in knowledge more nearly now than formerly, the engineer possessing more practical, and the contractor more theoretical knowledge, each has even yet a good deal to learn of the other, the engineer, however, having in many cases most to learn of the other; and hence a good deal of needless friction often exists between contracting parties. The first object of the engineer is to obtain a lasting and sound piece of work, while of necessity the contractor has to study the least expensive methods of putting work together. Very often contractors can and do give engineers useful practical hints and suggestions, which, however, are not always taken in a friendly spirit. Drawings ought to be as complete and to as large a scale as possible, and some extra days spent on perfect drawings saves weeks of work and much correspondence, mistakes, and heartburning afterwards. Wherever possible all the design ought to be perfected at once, leaving nothing to be subsequently done, for contractors have a reasonable objection to having the work hindered; and this does happen often if parts of designs are left over for further consideration. With regard to details, iron ought to be worked by the smith as little as possible, as every heating and hammering injures the fibre. Angle irons are often bent without any adequate need for it, and the straighter all the parts of an iron structure are the easier to rivet up soundly. Joint covers are often carelessly designed and badly fitted, yet they are very important items. Specifications sometimes have badly-worded clauses, and demand things utterly impracticable, such, for example, as stating that all the parts shall be drilled in the position they will actually occupy in the finished structure, and contractors read such specifications with contempt. Another absurd stipulation requires that all the plates, shall as soon as they are rolled and sheared, be dipped while hot into oil. No mill with which the author is acquainted has any appliance for such oiling. The oil, too, where applied, makes a dirty soun hard to scrape off, and, being sandwiched between the plates, prevents sound, tight rivetting. In respect of rivets, specifications demand that they shall be made of iron capable of enduring a tensile strain of so much. This is not wise. The proper thing is to demand that all rivets shall be capable of being bent quite round and closed down cold under a hammer without cracking.

As regards methods of work every contractor has his own method, and the engineer had better leave this to him. As to fastening the cross girders to the main girders, in some cases they rest on main angle irons at one side of the main girder, and are rivetted to the side web—this tends to cant over the main girders. Underbanging girders are free from this, but they must be very carefully bolted and rivetted, as bolts and rivets are the only support. In the author's opinion, fish-bellied girders are not advisable—the shape is more troublesome than the plain straight girder. As to rivetting, machine rivetting, wherever it can be resorted to, is best, but the work must be more carefully bolted up for rivetting, otherwise the rivets will be left loose. The heads of rivets (either machine or hand) ought to have their ends shaped to a sufficient depth, and the workmen must be carefully watched as to this, for it is easier for them to rivet short rivets than full ones. The words, "no drifting will be allowed on any account" in a specification are absurd, it being wholly impossible to put work together without it, but the drift is often recklessly used. As to cast-iron, this material seems to be going more and more out of favour, undeservedly so, the author thinks, for some purposes; but castings are often badly designed, the metal not being disposed to the best advantage, and the material is blamed for the faults of the designer. Lugs cast on columns are not good, and the Tay Bridge disaster proved this. Columns, too, are often carelessly cast, and fail as a consequence, and no part of a contract demands more attention from an inspecting engineer than the casting of these columns. In conclusion, the author invited discussion upon what is called the dispute clause of a specification, which constitutes the engineer sole and absolute judge, from whom there is no appeal. This clause contractors frequently repudiate, as being unjust and illegal.

ROCK-DRILLS AND COMPOUND ENGINES.

In a paper on the Mersey Railway, read before the British Association for the Advancement of Science by Dr. C. D. Fox, it was stated that the length of the railway is 3 miles 8 1/2 chains, of which almost the whole is either in tunnel or covered way, and it is being constructed for a double line throughout, with six stations. Two shafts have been sunk on each side of the Mersey, one being for pumping purposes and for communication with the drainage heading herein-after mentioned, and having a depth of about 180 ft.; the other for winding and ventilation from the main tunnel, and about 90 ft. deep. These shafts are lined partly with brickwork and partly with iron tubing. From near the bottom of each of the pumping shafts a drainage heading, rising slightly towards the centre of the river to allow the water to run to the pumps, is being driven partly by hand and partly by Colonel Beaumont's boring machine, which cuts a circular heading 7 ft. in diameter. Out of a total of 1774 yards, 1143 yards had already been driven up to Sept. 5. The sandstone rocks through which the works are carried, though hard and compact, is porous, and yields more or less water. The pumping machinery on each side consists of two 20-in. and two 30-in. sets of bucket lift pumps, driven by compound engines by Messrs. Hathorn, Davey, and Co., of Leeds. A 40-in. set of plunger pumps, to be driven by an overhead engine by Messrs. Barclay and Son, of Kilmarnock, is now being fixed as a duplicate on each side. The 30-in. sets have hitherto been found amply sufficient to clear the works. The paper described the mode of setting out the works, the precautions adopted under the river, the means used for tubbing back the water, and the details of the main tunnel.

In the discussion which followed the reading of the paper, Colonel Beaumont remarked that 5000 yards of rock had been cut with his machine at a fast speed. The rate expected at Liverpool was 1 ft. per hour, and they had attained to 7 ft. in eight hours. In chalk, the cutters would excavate 15 ft. before being changed, and in the Mersey sandstone they would cut from 3 in. to 18 in. without renewal. A more powerful machine was being built which would drive

headings at the rate of 8 yards in 24 hours without the use of explosives. There was a loss of power by compressed air transmission, but it was not irremediable. The boring machine utilised one-third of the original power, and he hoped to bring this up to one-half. As compared with water under pressure air had the advantage of being capable of indefinite subdivision, and the friction in the pipes was much less.

BRITISH CAPITALISTS, AND TURKISH MINES.

The little reliance to be placed upon Turkish integrity has become almost proverbial, and although thus far British mining capitalists have supplied but comparatively little money for the development of Turkish mines, the cupidity of the Turks is already displaying itself in a manner which, inflicting grievous pecuniary disadvantage upon those who have embarked in Turkish mines, is calculated to prove of the utmost possible injury to Turkish industrial progress. The Constantinople correspondent of the Times, writing from that city, on Tuesday, states that the attention of the British and continental money markets has latterly been directed more pointedly than in former times to the mining industry of Turkey, owing to the want of other means of investing surplus capital and the search for remunerative employment with some security less problematical than Government bonds or dubious railways. It is, therefore, all the more to be regretted that the Porte should have chosen the precise moment when European capital was inclined to pour into this country to enact vexatious, irrational, and suicidal regulations, which thwart the general mining interests of the Empire and ruin those of promoters and of promising mining ventures. A good deal of unpleasantness has been created through recent attempts to deal high-handedly with the owners of some boracite mines, who have invested much capital, expended much time, and incurred no little risk in these undertakings.

Under the mining laws of the Empire individuals discovering ore on their own land, if they elect to become legally possessed of the mine and to work it permanently, and export the produce within a given period of time, obtain a firm of concession. In the case of the boracite mines in question, the English and foreign firms interested had gone through all the formalities required, paying regular royalties, and had expended considerable sums on the works. No legal opposition had been made on private or public grounds, and the period for obtaining firmans, which were duly applied for, has long since expired. Actuated by some unexplained motives the authorities now say that provisional permits for working stated quantities of ore shall no more be issued, those already given having sufficiently remunerated the holders of them, the Government having decided to work the mines on its own account. As it is manifestly impossible for the Turks to find the means required to work the mines or to obtain any greater advantage than the royalties which the actual owners regularly pay the Treasury, this sudden caprice on the part of the authorities is, to say the least, unwise and vexatious, no less than unjust and unreasonable. The mining law provides that in such cases Government shall indemnify all owners for all outlay and loss; but inasmuch as no instance is known of the Porte fairly paying any compensation whatsoever, even in cases of well-proved downright spoliation, foreign capitalists have submitted to it. In this instance they would simply have lost their money like so many others unfortunate or foolish enough. The foreign merchants naturally applied to their respective Embassies to protect their interests, and the well-founded energetic representations which have been made in the proper quarters will, it is hoped, induce the Porte to see its mistake and withdraw the decree, which, if maintained, will produce much irritating litigation and ultimate loss both to the Treasury and to private interests with no sort of advantage.

The advantage which mining enterprise confers upon a nation is so generally recognised that, even in the most troublous times, miners in almost every country receive especial protection; and hence there are some who pretend to believe that this extraordinary action on the part of the Turkish officials is merely intended to attract attention to the Turkish mines, and that the virtual confiscation announced will quickly be contradicted and pronounced a mere idle rumour. Nor does this contention appear altogether groundless, for, curiously enough, the Times correspondent mentions this instance of Turkish rapacity and the mining capabilities of the Empire in the same letter. He remarks that the mining wealth of the Empire is, as a matter of fact, unlimited, and has been hitherto almost untouched, the Porte being without any means whatever of practically utilising this invaluable source of revenue. The example practically afforded by some of the mines already at work would appear clearly to point to a policy of liberal encouragement, rather than of petty obstruction, which can only be explained on the ground of culpable ignorance or by the fact, unfortunately too true, that the executive is meanly jealous of the prosperity of a foreign undertaking, and prefers to sacrifice the proportionate advantages. All advantages will be lost, and all desire to bring capital to Turkey again will be effectually stifled if the Government pursues an incomprehensible insane policy. His Majesty is known to be keenly alive to the importance of re-establishing the credit of the country, and to be extremely anxious to encourage foreign capital to return to Turkey. If the Turks be indeed desirous of attracting British capital into their country they must not only remember that hitherto shareholders in Turkish mines have received no dividends on their investments, but they must offer substantial guarantees that any rights granted will be permitted to remain absolutely undisturbed so long as the concessionnaires fulfil the obligations they have undertaken.

IRON INDUSTRY OF NEW SOUTH WALES.—The existence of extensive deposits of rich iron ores at Wallerawang, Lithgow, Mittagong, Mount Lambie, Berrima, Illawarra, and in various other parts of the colony, has been demonstrated—in many instances in the vicinity of coal and lime in abundance; but owing to the heavy cost of erecting smelting and other works, and the difficulty of securing the necessary skilled labour, very little has yet been done towards developing this important source of wealth. In fact, with the exception of the Fitzroy Works at Mittagong, which have been abandoned for some time past, the only works in the colony are those of the Eskbank Iron Company, at Lithgow Valley, which were originated in 1875. These works consist of furnace, foundry and forge, and rolling-mills; the two branches are connected by a horse tramway. Most of the plant, including a 24-ton fly-wheel, was made on the ground. The blast-furnace is capable of producing 100 tons of grey, or 115 tons of white iron per week. Both pig and malleable iron are made, and large quantities of rails for tramways have been rolled. Upon this company's property are iron ore, coal, fire-clay, and moulders' sand. During the year 1881 the Eskbank Iron Company made pig-iron to the value of 10,950*l.*; bar, angle, and rail-iron to the value of 31,086*l.*, and castings, &c., to the value of 5777*l.* During the year the blast-furnace was worked only five months and 17 days. With the introduction of sufficient capital and experienced skill a busy and prosperous future will become assured to the iron industry of the colony.

COAL PRODUCTS OF NEW SOUTH WALES.—The colony is wonderfully rich in coal, the principal shipping port being Newcastle, at the mouth of the Hunter, about 75 miles north of Sydney. Its surroundings remind an English visitor of the leading features of an English coal mining district; there are the same works at the pit mouth, the same co-operative stores, the same public-houses, with the old characteristic signs, the same broad-shouldered, thick-clad, sleepy-featured pitmen. It is as if a portion of the Durham or Northumberland coal mining region had become bodily transferred to the Australian coast. There are occasional disputes between employer and employed, but on the whole the relations between capital and labour are fairly harmonious. The coal measures embrace an area of about 23,950 square miles. The seams worked vary from 3 ft. to 25 ft. in thickness, are nearly horizontal, and are in some localities considerably above sea level. There are at the present time 41 collieries at work, employing in the aggregate above and below ground 4125 miners and others. In addition to the foregoing there are two

mines at which very valuable seams of petroleum oil, Cannel coal, or kerosene shale, are being worked. The number of men employed at these mines above and below ground is 231. Since 1865, when the working of these seams commenced, the output has been 241,284 tons, valued at 581,046*l.* There are three principal coal mining districts—the Hunter River and Newcastle coal field, situated to the north of Sydney; the Southern, or Illawarra coal field; and the Western, or Lithgow coal field, upon the Great Western Railway line, about 95 miles west from the Metropolis. Coal is also being worked near Berrima, between Illawarra and Lithgow; and some seams are known to occur in the country lying between Lithgow and the Hunter River. Sydney, therefore, occupies an almost central position with regard to the coal mining districts, and beyond these coal has been discovered in different parts of the colony—near Inverell, Denison-town, Dubbo, Barraba, Clarence, &c.

DISTILLATION OF COAL AND SHALE.

To reduce the amount of manual labour employed in and to effect more economically the distillation of coal, cannel shale, or other substances from which hydrocarbon gases or oils may be obtained, Messrs. WALKER and BENNETT, of King's Heath, propose to substitute machinery or other suitable apparatus in lieu of the ordinary apparatus now employed. A horizontal retort, the lower part of which is semicircular in transverse section, but the upper part is not limited to any particular form, is provided with a mouthpiece at each end and at the top of the front end there is attached a hopper from which the coal or shale is fed into the retort. This hopper may be furnished with a feeding screw in connection with a source of motion, and may, or may not be surrounded, or partially surrounded, with a water-jacket. The back end of the retort has also a mouthpiece, to the upper part of which is fixed the pipe for conveying away the gas or hydrocarbon vapours, and from the lower part of which depends a shoot, terminating in a large receptacle for receiving the coke or ash. This receptacle is capable of being opened and closed by a gas-tight door. Extending the whole length of the retort, and projecting through stuffing boxes in and beyond the mouthpiece at each end, is a hollow cast or wrought iron shaft. That part of the shaft within the retort has formed around it a screw made up of segments or otherwise, and is so placed that the lower part of the screw comes nearly into contact with the bottom of the retort. The front end of the shaft outside the mouthpiece has a spur wheel, pinion, or worm fixed to it, through the intervention of which the said shaft may be made to revolve by any suitable motive power. The opposite end of the shaft has a pipe attached to it by which the heated air passing through the shaft may be conveyed to the furnace. By this means the furnace is supplied with heated air, while the shaft is kept sufficiently cool to prevent it from bending. If found necessary provision may be made for the attachment of an iron plate extending the whole length of the upper part of the inside of the retort, and is so arranged as to be removed and re-inserted or renewed from time to time.

The action of the apparatus is this:—The retort being heated by the ordinary or other suitable form of furnace, the hopper being supplied with coal, or other material, and the jacket also being supplied with water, on motion being imparted to the screw, the coal will fall or be fed from the hopper into the mouthpiece, and from thence by the revolution of the screw in the retort it will be slowly propelled towards the back end thereof, and in the course of its transit will yield up its gas, or hydrocarbon vapours which will be conveyed away by the pipe at the back of the retort, while the coke will fall into the receptacle constructed for it and be removed at convenient times. The screw within the retort may be made of fire-clay, or of asbestos, or a combination of both, or the screw may be made of iron and coated with clay or asbestos, or a mixture of the same, or of any material suitable for protecting the screw, and so as to allow of any deposit of carbon that may be formed thereon to be readily removed.

CRUSHING AND PULVERISING MINERALS.

An ingenious method of crushing ores and minerals has been invented by Mr. CLAUDIUS JOUFFRAY, of Vienne, France. In carrying out the invention into practice he provides a cast-iron roller fixed upon a shaft, to which motion is imparted by any suitable means. A movable annular shell or hollow cylinder of cast-iron or steel rests freely upon the said roller, and upon the interior of this shell a grinding roller rests freely. He also provides guide-rollers for maintaining the said shell or cylinder in its proper position during the movement thereof; these guide-rollers are supported by standards or other suitable means. An inlet pipe is provided for the material to be crushed or ground, and there are scoops or buckets furnished externally with wire gauze. The material which has passed under the grinding roller falls into the said scoops or buckets which raise and throw back under the said roller all the pieces which are still too large. The smaller pieces pass through the wire gauze and fall into a receptacle below, whence they are conducted to sorting bolting mills in any suitable manner. Pipes are, moreover, provided for the return of the imperfectly crushed material which is brought from the bolting apparatus to the said shell or cylinder to be again crushed between it and the roller, together with the ordinary charge of material. The grinding and other rollers are sometimes made in two pieces—a permanent core and a hard metal ring keyed upon it. These rings, as well as the said shell or cylinder, are provided with grooves which produce a squeezing action upon the material to be crushed.

In order to facilitate the arrival of the material to be crushed under the shell or cylinder, the driving roller is placed slightly out of the vertical line passing through the axis of the said cylinder. This arrangement may be unnecessary for materials which slide easily, and in such case the whole apparatus would be symmetrical relatively to the axis of the roller. The details of construction may be varied according to the nature of the material to be operated upon, and other circumstances; the main features of the apparatus being the annular shell or cylinder resting upon a roller and enclosing a grinding roller. The apparatus may, if desired, be made of large size, and the said shell may enclose two or more grinding rollers.

MANUFACTURE OF ALKALINE SULPHATES.

In constructing an apparatus according to his last invention Mr. JOHN MACKENZIE, of Stockton-on-Tees, provides a large chamber forming a furnace, in which are arranged and supported a vessel or retort, or vessels or retorts, or one or more systems or series of vessels or retorts, the exterior surfaces of which are exposed to the heat generated in the furnace by the combustion of coal, coke, gas, or other combustible materials. In cases where two or more vessels or retorts form one system they are connected endwise by passages or communications so as to afford a continuous passage through each or every vessel or retort of the system from the point of supply in the uppermost vessel or retort to the point of discharge in the lowest vessel or retort, the size, number, form, and arrangement of the retorts or vessels, and their connections depending on the amount of material to be operated upon and the length of time required for its exposure to the heat of the furnace. In order to obtain a regular continuous flow of the material through the retorts or vessels of the apparatus he provides each retort or vessel with an internal central shaft placed longitudinally and revolving in sockets constructed with external covering caps or their equivalents, to prevent any escape through them of the gases evolved during the process. Each shaft is provided with a series of blades fixed at an angle so as to constantly agitate and carry forward the material through the entire length of each retort or vessel to the passage or communication connecting it with a vessel or retort placed in a lower position in which the same process is repeated until the material is discharged at the outlet.

The salt and acid or other materials to be operated upon are fed or forced into the uppermost retort or vessel by means of a screw or other suitable appliance, and the discharge is accomplished in the same manner, the pressure so applied being sufficient to compress the materials passing through the inlet and outlet pipes in such a manner as to cause them to act as continuous gas-tight plugs. In this way the vessel or retort, or the vessels or retorts and their con-

nections, are rendered gas tight at every part except where outlets are provided for the discharge of the gases which are conveyed in pipes of considerable length, which are connected at one end to suitable positions on the retorts or vessels, the other end being immersed in water contained in a tank or connected to a condenser of the ordinary type. By these means the discharged gases are cooled on their passage through the pipes previous to their being forced through a seal of water or passed through the condenser of the ordinary type.

It will be seen that by this arrangement of apparatus the obnoxious effects resulting from the escape of these gases are obviated, also that the material passed through the retorts or vessels of the apparatus are thoroughly exposed to the heat of the furnace without being brought into contact with the products of combustion, and the gases are therefore delivered to the condensers in a pure state, consequently any class of combustible materials may be used for heating the furnace without injuriously affecting the condensers. The shafts and appliances for feeding, working, and discharging may be driven by any suitable means, such, for instance, as endless bands, bevel wheels, and pinions or worms and worm wheels.

AIR-COMPRESSING ENGINES.—The invention of Mr. H. G. WILLIAMS, of East Greenwich, consists primarily in dispensing with connecting rods to transmit the power from the piston rod or plunger of any engine actuated by steam, compressed air, or water under pressure; and, secondly, can be used in an inverse direction for producing power by compressing air or by water to be used in any motor driven by a liquid or gaseous body under pressure. He uses a spur wheel revolving in an annular or internally toothed wheel, the diameter of the spur wheel or pinion being exactly one-half the diameter of the internally toothed wheel and gearing thereto. A stud on the pitch line of the pinion or spur wheel makes during its revolution around the centre of the annular or internally toothed wheel a straight line across its diameter, and the cross-head of a piston rod, actuated by steam, compressed air, or by water, attached thereto will necessarily travel in a straight line, and will thus preclude the necessity of using either connecting rods or guides. In the same way but in an inverse direction by making the spur wheel or pinion a driven wheel instead of a driving wheel he can use the pistons or plungers so driven as air compressors for transmitting power to other motors; the principle of using an internally toothed wheel in which is revolving an externally toothed wheel of one-half the diameter of the former remaining the same. The power to be transmitted is taken off or applied at the pitch line of the smaller or externally toothed wheel in each case. He claims that his invention also does away with the necessity of making the cylinders oscillating as is the case with water or gaseous engines where the power is taken directly from the piston rod, without the intervention of a connecting rod or its equivalent.

KING'S COLLEGE WORKSHOP CLASSES.—It is announced that the evening classes in the College workshops were resumed on Tuesday, under the superintendence of Mr. David Walker, M.I.M.E., and that additions have been recently made to the workshops, and new machine tools and instruments are being added to the plant, notably a testing machine, by Greenwood and Batley, of Leeds, presented by the Clothworkers' Company. The entire staff of the workshop instructors attend in the evening to carpentry, cabinet work, engine fitting and turning, turning in wood; additional instructors in these subjects, and for general smith work are engaged for the evening classes. The workshops are also fitted with the necessary appliances for moulding and casting in brass and iron, coppersmith's and plumber's work; and special instructors are retained on five students entering for such class. The Clothworkers' Company give an annual prize of 5*l.* in books for excellence in wood work, another of 5*l.* for excellence in metal work, open to all evening class students attending three terms in the year. General and special certificates of merit are also awarded for the work of the students.

PHILADELPHIA ELECTRICAL EXHIBITION.—It is arranged that an exhibition of electricity and electrical appliances shall be held in Philadelphia, U.S., commencing on Sept. 2, 1884, under the auspices of the Franklin Institute of that city. From the high reputation of the Institution, coupled with the fact that the projected exhibition will be the first in America exclusively devoted to this important and progressing branch of science, the above announcement has attracted unusual interest throughout the United States, and the exhibition will undoubtedly afford an admirable opportunity of witnessing a representative display of American discovery and invention in electricity. To increase its scientific and industrial importance, as well as to add to its attractiveness, it was determined shortly after its inception to give it an international character. The importance of the project having been properly represented to the Congress of the United States, an Act was passed which, having received the signature of the President of the United States, is now the law. This official recognition provides for the admission into the United States, duty free, of all articles for exhibition only. It may be added that no effort will be spared by the Franklin Institute to secure a large and important representation of the progress of foreign countries, and that the most liberal provisions will be made to place European and American exhibitors on a fair and equal footing. The subject of electricity and its application is at present attracting an unusual amount of attention, and the exhibition side by side of the best achievements of Europe and America cannot fail to be in the highest degree instructive. All information required by exhibitors, including the classification of exhibits, regulations for the entry of articles for competition, advices as to the best modes of transportation, custom-house regulations, and all other useful information, will be furnished to parties making application for space for exhibition.

SLEEPING IN A FIERY MINE.—On Sept. 28 an important case connected with the safety of miners and mines was heard at the Blackwood (Mon.) Petty Sessions. Joseph Hanley, haulier, was charged by the Newport Abercrom Coal Company with sleeping in a return air-way in the Celyn Colliery with a safety-lamp in his charge on Sept. 10. Mr. J. T. Green, the manager represented the company. Hanley pleaded guilty. Mr. Green having given evidence as to the serious and dangerous nature of the offence, and stating that he wished the charge to be pressed, the Bench fined the defendant 1*l.* and costs. The Chairman commented severely upon the reckless conduct of the defendant, pointing out the deplorable results which may have followed such gross misconduct.

MYSORE GOLD.—An extraordinary general meeting of shareholders was held yesterday to consider the reports recently received from the company's mines. Mr. Frank Taylor, who has returned from a visit to the company's mines, has formed an unfavourable opinion regarding the deeper points; whereas Mr. Bell-Davies and Capt. Plummer still retain the belief that the veins are true fissure veins, and that to sink through the hard rock is the right course to pursue. After some discussion it was decided to continue the working of the mine; but the directors were requested to concentrate their efforts on a few points of working.

COAL IN MEXICO.—The coal district of Zacualtipan, in Hidalgo, is attracting considerable attention. Coal has been discovered in 25 points, in nine of which its mining is pronounced practicable. Iron ore is also found in the district. The principal mines are, says the Mexican Financier, La Galena, Nuestra Señora de Guadalupe, La Constancia, La Sorpresa, La Coucha, San Rafael, Santa Cruz, La Trinidad, and Caparosa. The working of the mines of this district is practicable with slight cost, for nothing more than tunnels and slopes will be necessary for many years. In the Guadalupe and Constancia mines the coal is brought out at a cost of only \$1 and \$1.25 a ton.

Mr. A. A. Broad (Broads, Paterson, and May) has been appointed official liquidator of the Carta Para Gold Mining Company (Limited) in place of Mr. James Waddell, removed by order of the Court.

FOREIGN MINES.

ALAMILLOS.—Sept. 22: The lode in the 23 driving east of San Martin's shaft is small and quite unproductive at present. The 80 driving west of San Felipe's shaft is a large, strong and masterly-looking lode producing nice lumps of ore worth 1 ton in a fathom. The lode in the 50 driving in the same direction is of a very promising appearance, yielding $\frac{1}{2}$ ton per fathom. In the 85 driving east of San Enrique's shaft the lode is no value, and the ground very hard for driving. In the 130, driving east of Taylor's engine-shaft, no improvement has taken place. The lode in the 130 driving west of Taylor's engine-shaft is regular and place. The lode, but has declined to no value. The 80 driving east of San Victor's shaft is opening up valuable pieces of lode at a cheap rate, worth 2 tons in a shaft. In the 50 driving west of San Victor's shaft there is a pretty good lode in the back of this level, valued at $\frac{1}{2}$ ton per fathom. The lode in the 70 driving in the same direction produces stones of ore occasionally. The 70 driving west of Judd's shaft is passing through a small unproductive lode. The lode in the 20 driving west of Judd's shaft is a little ore, but not sufficient to value. In Bartolo's shaft the lode is sinking, and the 20 driving in still very hard for sinking, and the lode is making slow progress. Nicolet's mine sinking below the 70 is passing through a very valuable lode worth 2 tons in a fathom.

ALMADA AND TIRITO CONSOLIDATED.—Richard Harris, Sept. 1: At Mina Grande, during the past fortnight, No. 1 winze below No. 45 drift, was sunk 5 ft. 10 in.; width of pay streak, $\frac{1}{2}$ ft.; yield, 6 tons per cubic fathom. No. 2 winze below the same drift, was sunk 5 ft. 4 in.; width of pay streak, 4 ft.; yield 16 tons per cubic fathom. No. 45 drift at Tunnel level was extended north, yielding 10 tons per cubic fathom. No. 12 drift, 8 tons per cubic fathom. The 9 ft. 3 in. lode, at the 12 ft. level, was extended 4 ft. 10 in.; width of drift north on the 10 ft. level, was extended 4 ft. 10 in.; yield, 6 tons per cubic fathom. The drift south on the 10 ft. level, was extended 4 ft. 10 in.; width of pay streak, 3 ft.; yield, 12 tons per cubic fathom. There are six workings in the lode in the 100 level in Mina Grande which have yielded in the fortnight an average of 9½ tons per cubic fathom, or in the aggregate 56 tons per cubic fathom for the whole. There are four workings in the San Juan slope above Tunnel level, which have yielded in the fortnight an average of 4 tons per cubic fathom. The lode in the south drift was extended 11 ft. 10 in. The forebreast is in 5 ft. of good milling ore, yielding at 20 tons per cubic fathom.

CALIFORNIA GOLD.—The usual weekly report has not yet been received having been delayed in transmission. The telegram received from the manager on the 5th inst. was as follows:—Mill run 500 tons; yield, \$5000 (10000); smelting ore sales, \$510 (1024); total, 11024.

CANADIAN COPPER AND SULPHUR.—F. Bennett, Sept. 21: There is not much change in the general average production of the mines. In the cross-cut at the 23 ft. level, east of No. 3 shaft, we have passed through a branch of 8 and 9 in. ore, but have not yet intersected the main lode of a branch of the lode in the stope below. In the 10 ft. level, east of No. 4 shaft, we have a lode of ore of about 14 in. wide; the total width of the portion of the vein in which this lode occurs is from 2½ to 3 ft. wide, and is looking very promising. Our smelting works are running steadily and well, making a good grade of regulars. The use of the capel ore has enabled us to improve and keep up our grade of regulars, and I shall make every effort, consistent with proper economy, to increase the returns of units of copper.

COLORADO UNITED.—Mr. Macrae, Sept. 16: The 13th level, east of the shaft, is showing a 3 in. streak of good mineral. The winze at the bottom of this level has from 2 to 3 in. of ore. There is no change in the stope, which are producing about their usual quantities of mineral. The Fenton lode in the West Tunnel is showing a very promising crevice rock with mineral scattered through it, the lode being about 2 ft. wide. A winze has been commenced in the breast of the Silver Ore drift with 3 in. of mineral showing. The contract has been set at \$1150 per ton, and was commenced yesterday. The lode, west of the 10th level, has a fine streak of ore from 1 to 2 in. thick. The mill has been running steadily since Monday last, when it was shut down to reset the rollers. About 90 tons of dirt were put through. The following amounts of ore were shipped during the week:—116 sacks of cobbed ore weighing 5 tons 1680 lbs.; 17 sacks of screenings weighing 1600 lbs.; 73 sacks of zinc headings weighing 3 tons 1385 lbs.; 15 sacks of Colin ore weighing 1530 lbs.; total, 221 sacks weighing 11 tons 135 lbs. There are 4 tons of lead headings and 2 tons of Free vaner headings on hand.

CORPORATION OF THE SOUTH AUSTRALIAN COPPER.—Capt. Bryant, Aug. 9: Blumman Mine, Masey's Shaft: In the 60 the men have secured the arch and shaft against the old workings, and are making fair progress in cutting tip-plate, which we anticipate will be completed within a week from date. The 60 shaft is being energetically pushed, in order to communicate with the winze sinking below the 50. In the level being driven in the footwall the stuff broken is poor. The winze in the bottom of this level is being sunk, in order to communicate as early as possible with the 70 shaft; present value of the portion carried, 2½ tons per cent. ore per fm. I have put four men to stop the back of the 50 shaft, value 2 tons 20 per cent. ore per cubic fathom. I have also placed three men to stop the bottom of this level, which we estimate will yield 3 tons of 22 per cent. ore per fathom. The tributaries in the back of the 35 south are making fair wages.

—Capt. Tregoweth, Aug. 17: Mount Rose Mine: Engine-shaft has been sunk during the last month 3 fms.; present depth 11 fathoms below the 23 plat. We have put in frame, set and divided down winze shaft, and commenced to cut a plat at the 33. As soon as the plat is cut, which I estimate will take about a fortnight, we will press on a cross-cut north to intersect the run of ore ground. The 23 has been extended 2 fms. 4 ft. 8 in. east. The present forebreast is composed of iron pyrites and strong mudstone with occasional stones of copper ore, and is letting down a good deal of water. Work here has been suspended for the present to enable the men to rise and stop the back behind the end, where there is a good lode, at present worth 2½ tons 35 cwt. 40 per cent. ore per fm. Stope in back, 23 ft. east of shaft, is about the same as last month, making small deposits of rich black and gray ore the width average about 1 or 1½ ton per fm. Stope in bottom of 13 is also composed of small deposits of ore. I have put the men to stop towards the south part of the lode, with a view of intersecting the ore ground being worked on in the 23 east. We estimate this stope will yield 1½ ton 30 per cent. ore per fm. As soon as the 23 end is in under and drained the run of ore ground above we hope to be able to increase our returns.

DEVALA MOYAR GOLD.—Mine manager, Sept. 8: We have made slow progress with the drives this week, as for some unaccountable reason the roads stuck in the ground. I am now drawing the column to see what is the matter. **EBERHARDT.**—Frank Drake, Sept. 8: Raise No. 2 has been advanced 11 ft. making the total length 98 ft. We are still working in quartz; it seems to be mixed a little more with spar, which I think is a good indication, and I still have confidence in its coming into better ore. The 2nd level, Raise No. 3, has advanced 4 ft., making total length 34 ft. We have the wall well defined, and a little clay and spar in the drift. The line rock is hard. In the south drift from No. 3 raise, the progress of the drift for the week has been 7 ft., making total length 195 ft. We find considerable quartz lying in bunches. The ground is quite soft and we think the prospects we have must lead us into something much better very soon. During the coming week I think of starting off a level south from our No. 2 raise, and following along in the quartz, and when far enough away from the raise shall cut across the ledge to determine its width, and it is possible we may find better ore lying on the other side of it, or nearer the hanging-wall of the ledge. You will bear in mind that this No. 2 raise has been in quartz from the level of the tunnel, and how wide it is above our first level we do not know, as we have seen but one side of it. In places our raise has extended back from footwall fully 7 ft., and shown nothing but quartz. The ledge looks strong and good—it must lead us into ore.

FORTUNA.—Sept. 26: Canada Inco Mine: The 70, driving west of San Pedro's shaft is still influenced by the cross-course, and is consequently valueless. The 90, driving in the same direction, has improved to $\frac{1}{2}$ ton per fathom, and looks very promising. In the 120, driving east of O'Shea's engine-shaft, there is scarcely any lode in this end, and the ground is hard. The 100, driving east of Lowndes shaft, has declined in value to $\frac{1}{2}$ ton per fathom during the past few days. The lode in the 70, driving west of the 70, is wide and yields occasional good lumps of ore, valued at $\frac{1}{2}$ ton per fathom. **Los Salidos Mine:** In the 175, driving west of Taylor's engine-shaft, the lode is very small and poor, and the ground hard. The lode in the 175, driving east of Taylor's engine-shaft, is of no value, and the ground disordered and broken. The 160, driving in the same direction, has improved to $\frac{1}{2}$ ton per fm.; lode large and kindly, but very wet. The 145, driving east of Taylor's engine-shaft, has declined to 2 tons per fm. In value, but yields splendid rocks of ore. The 130, driving east of Taylor's engine-shaft, continues to yield 1 ton of ore per fm., as for some time past, and the ground is still hard. Virginia's winze, sinking below the 145, has again been suspended on account of an increase of water, too much to sink. Marco's winze, sinking below the 120, has declined in value to 1 ton per fathom in the past few days, and the ground is harder.

San Antonio Mine: In the 65, driving east of Henty's engine-shaft, there is a large lode, worth 1 ton in a fathom, and is opening out good stopping ground. The lode in the 55, driving west of Henty's engine-shaft, is 4 ft. wide, containing barytes, and occasional good stones of lead ore. The men in the 30, driving east of Tesoro's engine-shaft, are getting on well with the driving, but have not yet reached the lode. In the 30, driving west of Tesoro's engine-shaft, we hope to cut the lode here soon. The lode in Madrid's winze, sinking below the 55, is very wide, and the part in which we are sinking has a very promising appearance, yielding $\frac{1}{2}$ ton per fathom. **San Francisco Mine:** The lode in the 40, driving east of San Francisco engine-shaft, is regular, but has not improved in value, its present worth being $\frac{1}{2}$ ton in a fathom. In Garcia's winze, sinking below the 30, the men are making good progress in sinking; the lode continues small, producing $\frac{1}{2}$ ton per fathom.

HOOVER HILL GOLD.—Sept. 13: The drift south from the Gallimore at 170 (the bottom) has holed through to the winze, and is being continued further to the south on the ore. The cross-cut east from the 130 has been advanced 10 ft., and, as the ore has been cut through, the men have been put to drift to the north from the Gallimore shaft at 170, on the streak of ore going off in that direction. The wire-rope we have here is too short to sink any deeper; it is also in bad order, so we have ordered a new one, and as soon as it arrives will start sinking the Gallimore shaft deeper. In the tunnel stope there is no change to note. In the cross-cut north from the 135, west of the Hawkins' shaft (drift from the bottom), we have cut a small streak of soft ore, which pans fairly well. In the mill we have been running 15 stamps most of the time, occasionally dropping all 20. There has been good rain, so there is no likelihood of further scarcity of water this season. [The bar of gold, as advised on Sept. 10, has been received at the company's offices.]

HORNALL GOLD (INDIA).—Manager, Sept. 1: Main Shaft: The cross-cut at the 100 has been extended to a further distance of 6 ft., total distance from shaft 9 ft.; country very hard and quite dry, no signs of the reef yet. I may mention that the reef at surface is about 30 ft. west of the main shaft, and is nearly vertical, so that we shall have to drive a distance of 21 ft., that is, supposing the reef to continue vertical in its downward course, and we have as yet no evidence to the contrary. **Turnbull Reef.** No. 1 Shaft: South drive has been extended 4 ft., total distance from shaft 56 ft.; no change to report in this part of the mine. **Stopes.** No. 4 stope south has been extended to the break 21 ft.; reef 4 ft. wide, and showing gold often. North stope No. 3 has been extended to 27 ft. from the shaft; the reef in the end of this stope is about 2 ft. wide; we are getting nearly through the reef in this stope. You will understand by this that the reef contracts in extent as we get near the surface, and of course increases as we descend. We have raised 20 tons of quartz during the week, which I believe to be of good quality; total raised to date from these workings 255 tons. Air-shaft has been sunk a further depth of 2 ft., total depth from surface 50 ft.; we can do no more at present. In this shaft we are interested the reef in the 100 crossing the reef drain. In the 100 the South shaft drive has been extended 4 ft., total distance from shaft 10 ft.; reef 2 ft. wide. We

have commenced to drive south and have driven 4 ft.; reef $\frac{1}{2}$ ft. wide; the quartz in both levels is of a good appearance, though no gold is visible, but on testing it in the ordinary way we got a very fair show of gold. Quartz raised 8 tons, making total from this shaft 48 tons. We have started a shaft on an outcrop of quartz about 300 ft. south of No. 1 south shaft, and which we will call No. 2 south shaft. We have sunk 6 ft. on the reef, which is nearly 2 ft. wide, and though we can see no gold in the stone, yet it is of a highly favourable appearance. **Erection:** The crushing plant will be completed in two weeks from date. We got up steam on Thursday last to try the boiler and engine, and it worked most satisfactorily. There are a few outside works yet to complete, but these can be done after crushing has commenced. Coolies' wages for the fortnight Rs. 352-14. Quartz raised to date:—Turnbull reef, 512½ tons; Leighton reef, 137½ tons; Smith reef, 107 tons; total, 757 tons.

ISABELLE GOLD AND SILVER.—Lewis Chalmers, Sept. 10: The orebody in the new strike is still looking well; we have run east 18 ft. through it, and although there are more bars of cab with the ore there is no appearance of its giving out. I have got an experienced foreman to take charge at the mine, and our force increased to six miners and a carman, with which, and the engineer, I think we can get out 3 tons a day. I have also succeeded in getting another team, and the two think they can haul 3 tons a day. We had to shut down the mill for want of salt, and to put in new dies in the battery and pans, and new shoes in the settlers, and for a general clean up. The new team I have got on hand to make up the cartload of 10 tons. I shipped on Saturday two more bars of bullion (\$800), and when our clean up is made will ship more. I have got through all the low grade except about 5 tons in the agitators, and on the cooling-floor of the furnace. When we start again we shall work this up, and then run on the rich ore. Some of that ore goes as high as 35 to 44 per cent. copper, and \$50 to \$80 in gold and silver. The green hands at the mill are getting more au fait with their work.

KOLHNOOR AND DONALDSON CONSOLIDATED.—The usual weekly report has not yet been received, having been delayed in transmission.

LAKE SUPERIOR NATIVE COPPER.—Capt. Williams, Sept. 1 to 15: No. 3 level south, on course of lode from No. 1 shaft, advanced 17 ft. 6 in. The lode at this point is at present somewhat disturbed on account of passing through a band of conglomerate. We passed through some native copper before reaching this conglomerate, and as the band in the levels above is very narrow, we may expect copper again in a few feet. The walls of the lode continue very regular, showing that this band has little effect on the lode. No. 2 level south, on course of lode from No. 3 shaft, advanced 21 ft. No change of import since my last. No. 2 level south, on course of lode from No. 3 shaft, advanced 17 ft. 3 in.; here the lode continues to widen, looking very promising at present. No. 2 level north from No. 3 shaft, on course of lode advanced 13 ft. 4 in. Lode still continues very productive of native copper; here we are opening up very good ground for stopping. No. 1 level south from No. 3 shaft, on course of lode, advanced 9 ft. 8 in., producing occasional pieces of native copper. The end appears to be entering another run of copper, as the lode has become much harder, and the lode is few feet driven. No. 2 and 3 levels, north of No. 1 shaft, have been idle since my last, the men having been employed at surface enlarging our dock, &c., consequently there is no change to note. Our trial shaft on new lode at Creek has reached a depth of 18 ft.; the lode continues to look very promising, producing occasionally very fine stones of native copper rock. In testing this lode with the Diamond drill we have found a little native copper in the cores. I have now begun another hole at an angle of 70°, which will strike the lode at about 80 ft. from the surface. During the past week I have had some men test a band or belt of amygdaloid on an island at the harbour 2 miles to the west of our main work. So far we have had very good results indeed. We have traced the belt about 250 ft. in length, and find it from 10 to 12 ft. in width, in the centre of the bit for about 2 ft. wide; in places I got out rock producing 4 to 6 per cent. of heavy shot copper. In fact, I have seen nothing to equal it since I came here. These belts are very productive in the south ore. The Atlantic, which I visited, is very similar. If this belt continues as productive in depth as it is at surface, we shall have a very productive mine at this point. In the course of a few days, when I have seen a little more of it, I will write again, and send you a couple of samples. We are now running up steam in our new boilers, and tried our engines in the dressing-floors; these we found to work satisfactorily. We have not yet started the stamp-mill, I am sorry to say, the reason being the non-arrival of two valves and some copper ragging for our rigs. These I hope to receive to-day; if so, shall start on Monday. All other surface work is progressing well.

INARE.—Sept. 26: Pozo Ancho Mine: In the 130, driving east of Warner's engine-shaft, the lode is large and strong, yielding fine lumps of ore, worth 1 ton in a fathom. The lode in the 130, driving west of Warner's engine-shaft, contains a little ore, but not sufficient to value. The 115, driving in the same direction, has further improved to $\frac{1}{2}$ ton per fathom. The 135, driving west of Peill's engine-shaft, continues unproductive. The lode in the 135, driving east of Peill's engine-shaft, is compact and regular, and of a promising appearance, yielding 1 ton of ore in a fathom. In the 130, driving south of Peill's engine-shaft, satisfactory progress is being made in this cross-cut. The 105, driving east of San Francisco shaft, is opening up stopping ground; worth 1 ton per fathom. **Quintones Mine:** The lode in the 100, driving west of Taylor's engine-shaft, is a good one, yielding a body of rich ore; the ore is of the same character and quality as that taken from Atwood winze, and also the character of the rock is the same. Also in explorations I have made from Atwood winze, a distance of 75 ft., the same character of ore and rock was found, which leads me to believe we are nearing another ore body of same quality.

PRESTARENA UNITED.—The gold returns for September were as follows: From Prestarena District 312 ozs. 13 dwts. 8 grs. from 613 tons of ore, equal to 10 dwts. 21 grs. per ton. Val Topa District 108 ozs. 2 dwts. 6 grs. from 26 tons of ore, equal to 8 dwts. per ton. Total 420 ozs. 15 dwts. 14 grs., obtained from 882 tons of ore, giving an average yield of 9 dwts. 12 grs. per ton. **Oct. 2:** District of Prestarena: In the incline shaft sinking below the 130 the junction of Nos. 1 and 2 lodes appears in the bottom, having considerable width, but mostly sterile rock. No. 2 line will now be left in the west end. The 130 end north on the No. 1 lode has a decent branch of ore coming in, yielding 3 tons per fathom, at 9 dwts. per ton; but driving is now suspended to sink the winze-plat. The south end of this level is improving, with a larger lode and more congenial rock, and is now yielding $\frac{1}{2}$ ton per fathom at 10 dwts. per ton. The 160 north end is also improving. **No. 3 Lode:** The 90 north shows a large lode splitting into two branches with the one on footwall, promising to make ore, whilst the other, being sterile quartz, goes off west. The 90 south has a good-sized lode of hard siliceous rock, sparsely impregnated with poor pyrites. The 80 north carries a small flookan branch in a large width of mineralised schist without ore. The 80 south goes forth in a large coarse lode of quartz and schist, having ore in back, and yielding 2 tons per fathom at 13 dwts. per ton. The 65 south continues in hard siliceous rock, letting out much water. In the 30 north, the lode is scattering, but yielding, saving work. The 30 north has a little low grade ore in hard siliceous rock. The Pozzo and adit, driving south, is in hard massive micaceous rock, with a string of ore stone on footwall. The Cavone adit has been opened by three men to 352 metres without meeting with any large excavations or lode of value yet; driving is suspended temporarily to place men in the woods.

Val Topa: The end driving south on new lode and slide is yielding 6 tons per fathom at 6 dwts. per ton; the lode has become smaller in back, whilst under the slide very quartz, and a more barren character. The rise in the back close to the adit slide shows an increased width of ore in the roof with more regularity and better ore, giving promise of opening a good piece of ground; its present yield is 8 tons per fathom at 12 dwts. per ton. The trial stope on quartz at winze in No. 1 level is giving 9 tons per fathom at 10 dwts. per ton. The flat bed here is now rising up into a regularly inclined lode, and appears to extend north and south, though rather small in the latter direction. A cross-cut east, on north side of cross-course, has been started to hole to trial stope, and leave arch for supporting ground north-west. It yields patches of ore on rising side, and has now gone through the quartz, which shows as a small rising band yielding good grade ore. The rock on the other side of quartz being good driving will be continued to prove it. The cross-cut over quartz mass in flat stope is holed to flat lode stope, having traversed sterile schist only. The rise in back of No. 1 level on new lode having got into the schist has been stopped, and this remark will apply also to the drive south from stope on west lode, and that south on great quartz lode at No. 2 level.

PONVILLAUD.—W. H. Rickard, Oct. 2: Bouro: The lode in the 225 metre level, south from Taylor's shaft, has improved in value, varying from $\frac{1}{2}$ to $\frac{3}{4}$ ton of ore per current metre. The rise behind this end and the winze from the level above open stopping ground. The lode in the end of the 200 metre level south produces a little low quality ore. The stope in the back of this level is diminished in value. **Virginie's Lode:** The 80 metre level north yields a little low grade ore. The 60, on the same part of the lode, yields $\frac{1}{2}$ ton of ore per current metre. The same level, north of Boisy's winze, is unproductive. The 40 and 20 metre levels north yield $\frac{1}{2}$ ton of ore per current metre each end. The 20 metre level south of Virginie's lode is unproductive. **St. Denis:** The sinking of the engine-shaft, below the 50 metre level, goes on regularly. The 50 metre level, north of shaft, produces a little ore. The 30 metre level, north of shaft, yields ore of fair quality for a width of 30 centimetres. The rise in the back of the 30 metre level south, on western part of the lode, is holed to the winze from the adit, and the driving of the 30, north from cross-cut, resumed, where the lode yields stones of ore. The adit south of shaft, on eastern level, yields a little low quality ore. **La Broussin:** The 200 metre level north of shaft, has assumed a more promising appearance, producing stones of ore. The lode in the 180 metre level north is 4 metres wide, yielding $\frac{1}{2}$ ton of ore per current metre. The same level south from shaft shows spots of ore. The 120 metre level north is unproductive. The driving of the cross-cut east and north from this mine goes on pretty well. **Prenal:** The 110 metre level, north from St. George's shaft, yields $\frac{1}{2}$ ton of ore per current metre. The lode in the same level south yields a little ore irregularly. The 90 metre level north, on the eastern part of the lode, yields $\frac{1}{2}$ ton of ore per current metre. The same level south, on main lode, lays open tribute ground. The 70 metre level south yields $\frac{1}{2}$ ton of ore per current metre. The 70 north, on caunter lode, continues in disturbed, unproductive ground. We have set a cross-cut west behind the end to prove a lode lying in that direction, which shows indication of a kindly nature at the adit level. We have also set to cross-cut in the 50 metre level south to prove the part of the lode now being driven on in the 70 below this point. **Surface:** The weather has been favourable to our driving operations, and the lode has been carried on without interruption, and our sampling has been amounted to 189 tons.

POTOMAC.—Sept. 5: Between 700 and 800 ozs. of gold remitted for the month.

RHODES REEF GOLD.—Mine manager, Sept. 8: The Chilian mill and Morris's settler are working well, and next week I hope to send you the result of 13 tons of pyrites we have just put through. All going well at the works.

RICHMOND CONSOLIDATED.—Telegram, Oct. 2: Week's run (one furnace), \$20,000, from 308 tons of ore; refinery, \$15,000. **St. Longley.** Sept. 10: The 100 south drift from above has been run 11 ft. Total 45 ft. In limestone. The 300 level. During the week have explored under south-east edge of the cave taking out some ore, present face in red lime. The 300 south-west drift has been run 13 ft. by hand-drill. Total 294 ft. In broken limestone. The 105 south-east drift on fissure (from north-east drift) has been run 20 ft. Total 42 ft. In limestone. The 1050 west drift from north-west drift (on quartzite contact) has been run 22 ft. Total 39 ft. On quartzite and limestone contact. The 1050 south-east intermediate drift (on fissure from rise to 930 winze) has been extended 4 ft. Total 128 ft. In limestone. The 1050 rise south from above has been extended 25 ft., perpendicular. Total 59 ft. Through crushed limestone and ledge matter, far in ledge matter. The 1050 south intermediate drift from north-east drift from rise has been run 12 ft. Total 12 ft. In broken limestone. Commencing 105 ft. in from the rise to 900 level. The 1050 rise on fissure has been run 20 ft. Total 20 ft. In limestone. Commencing 46 ft. in from north-west drift from station.

RIO GRANDE DO SUL (BRAZIL) GOLD.—H. Eddy, Aug. 18: Aurora Mine: In No. 1 gallery west the lode further increased in size during the week, being now 1½ ft. wide. The pyrites (arsenical and iron) have also increased in quantity, but the produce remains low, being at present 2½ dwts. of gold to the ton. No. 2 north-west on cauntering slide has slightly hardened, but fair progress is being made towards the several lodes north of us. I have made openings on two other lodes north of the Aurora, which both produce pyrites and low quality ore for gold. There are two new lodes, making the number of lodes in the Aurora only to be ten. I shall give them a week's further trial, and shall duly sample the stuff, forwarding the results. At other points there is no material change. **Reduction Works:** For some little time past these have only been worked intermittently to prove the class of stuff we are breaking. The works being small and more experimental than otherwise would result in a loss on the dressing of low class ores, which on a large scale with proper mechanical appliances to reduce manual labour to a minimum would result in a profit.

ROSS UNITED GOLD (New Zealand).—Mine Manager, Hokitika, Aug. 9: The works at the mine are proceeding very satisfactorily, the second cylinder of the pumping-engine is on the ground, and being placed in position. So far as we have now ascertained the wash has been found to extend over an area of 200 ft. long and 100 ft. wide, and the drives Nos. 4 and 3 will further prove the width to the end of our present main drive. We have now sufficient data to go on with the sinking of a shaft for the purpose of working out the layer, which I have no doubt will prove highly remunerative when worked in a systematic manner. **Prospecting—140 ft. level:** We have only one drive at this level; it is about 150 ft. long towards the terrace. We have followed a thin layer of wash varying from 13 to 30 in. thick, but the bottom is not well defined; it is, however, the general opinion amongst practical miners here that if this layer gets on to a well defined bottom as we near the terrace, there is every probability of the wash getting thicker and better. The contractors for the tail-race extension are making fair headway with their contract, and if nothing unusual occurs they should have their work finished up to the Old Golden Gate shaft in three or four weeks, when the old workings of Jones' flat will be drained, and we should be able to prosecute the completion of the tail-race to the proposed site for erection of elevator by different faces of the old shaft, which could be cleared out for that purpose, and get it finished in comparatively short time. During the past few weeks we have been pumping clear water from a permanent level under somewhat similar circumstances to what will eventually be the case when the shaft is bottomed and the pumps fixed in their proper places (with sink, catch-pit for sediment, &c.), and I find the result to be that the water-engine worked two 15-ft. lifts, pumping the water from a depth of 150 ft., the speed being 7½ strokes of 8 ft. 6 in. per minute. I cannot conclude this account of the mine without expressing my entire satisfaction at the manner in which the work of the engines has been executed by Messrs. Price Bros., of the Thames, the castings and general works of each and every part being most substantial, well finished, and reflecting great credit on them, as the work is not to be surpassed by any establishment in Europe.

RUBY AND DUNDERBERG CONSOLIDATED.—Sept. 9: Dunderberg: The drift from the upraise has been advanced 7 ft. during the week; total, 115 ft. from the upraise. There are 16 tributaries at work, and 12 tons tribute ore shipped during the week. **Hone Ticket:** The incline has been sunk 9 ft. in ore during the week; total 29 ft. below the 150 ft. level. There have been small lots of ore from this incline shipped during the week, assaying \$39.75 with 32 per cent. lead, and \$36.70 and 24 per cent. lead, which is quite an improvement on the ore encountered on the 150. The bottom of the incline is in ore similar to the above. There is considerable low grade ore above the 150, on which no work is being done at present on account of its grade (about \$20). All the ore at present extracted comes from the bottom of the incline, and from a pillar of ground between the 150 and 60 from the old shaft. The latter place will soon be exhausted. In the meantime the incline is being sunk as fast as possible, in order to open new ground. Have shipped 100 tons ore this week, and have 20 men at work. **Lord Byron:** Another contract has been let to run 100 ft. more or less at \$3.50 per foot. The tunnel has been advanced 11 feet during the week; total, 296 ft. **Telegram, Oct. 2:** 82 tons ore shipped, and 25 tons smelted; realising net, \$50.

ST. JOHN DEL REY.—Telegram from Morro Velho: Yield for the second date of September, 300 dwts. per ton.

SOUBAC AND CARL ALAN.—A. Down, Sept. 22: Report of work done at the mines for two weeks ending Sept. 22: No. 1 Level: During the past fortnight the men have been engaged in clearing out the level and preparing it for the tram-road, consequently there is no change to report from the end. **No. 1 Gallery, or Guaracino's Shaft:** By four men, driven 5 ft. 7 in. In this we have met with some spars of mineral, but nothing of importance. **No. 2 Level:** No. 1 Gallery on Cross-cut North: By four men, driven 9 ft. This, as I stated in my last report, is being driven in the above direction, in order to prove the extent of the vein. We have met with one or two small veins containing a little mineral, shall therefore continue this drift. **No. 2 Gallery:** Here the men are engaged in stopping, and I am very pleased to state that the richness of this stope is quite coming up to my expectations; and, as you will see by the list of mineral sent to England, some of the cases are worth per ton for argentiferous gold 271 ozs., or, in other words, say 1200 per ton. **No. 3 Level:** By four men, driven 8 ft. We are making fairly good progress here now. During the past fortnight we have met with another branch of blende and lead ore—this block is literally saturated with mineral.

—F. E. Ware, Sept. 22: Underground Workings, South-east Ravine Level: This place is without change since my last. Distance driven, 2 ft. 8 in. **East End:** We are meeting with occasional small spots of ore here, but nothing of value. Distance driven, 1 ft. 1 in. **No. 3 Lode:** A small rib of ore has been cut here, which will yield about $\frac{1}{2}$ ton per fm. Distance driven, 2 ft. 4 in. **St. Barbe:** The entrance here is not yet opened. Except for a day or two the hand-jiggers have been kept regularly at work. The past fortnight we have got several boxes of very good ore. The remainder of the works are going on satisfactorily.

UNITED MEXICAN.—Mr. Hay, Guanajuato, Sept. 3: Mine of San Cayetano de la Ovejera: In the frente of San Juan west the lode has a width of, say, 55 c., of which 10 c. close to the wall of the bajo is in ore of a superior class. We have sent to Duran last week 19½ cargas from this end. In the pozo No. 2 of San Juan the lode has a breadth of 55 centimetres, and the ore is fair. From this winze were remitted to Duran last week 7½ cargas. In the frente No. 2 of Santa Rosa west of a good ore of a good grade has again been found in this working, and the lode measures 40 centimetres in width; 62½ cargas were sent to Duran last week. In the frente No. 2 of San Andres the lode has no change in the appearance of the lode, but the remittance to Duran on last Saturday was only nine cargas. In the frente No. 4 of San Andres the east last Saturday 5½ cargas were sent to Duran; this end is stopped for the present. In the frente No. 5 of San Andres the lode is 80 centimetres broad, of which 50 are in fair ore. Last week's remittance to Duran was 37½ cargas. In the frente No. 6 of San Andres the lode has the same appearance as last week, and the remittance to Duran was 32 cargas on Sept. 1. **Frente No. 7 of San Andres:** The appearance of this working is good, the breadth of the lode being 120 m., all in ore ramified over its extent included in this measure we have about 40 centimetres of good ore which produced one carga of bonito last week, but the remainder of the ore was extracted only on Friday, and could not be sent to the reduction works last week. **Frente No. 8 of San Andres:** The lode has also been driven east from pozo No. 1 of San Andres the lode, measuring 91 centimetres all in ore of a fair class. We remitted seven cargas to Duran last Saturday. In the opposite direction we have frente No. 9 of San Andres west, the lode 1 m. broad, but the ore not so good as that in No. 8; 5½ cargas were sent to Duran last week. In pozo No. 1 of San Andres the appearance of this working is the same as last reported, but on account of having begun frentes Nos. 8 and 9 we have only remitted 7½ cargas to Duran. In the continuation of pozo No. 3 of San Andres the lode is 1 metre broad, with ore in patches; 8½ cargas were sent to Duran last week. We have begun sinking pozo No. 4 of San Andres on a narrow strip of good ore only 25 centimetres wide in the frente No. 1 of San Andres; from this winze we have sent 11 cargas to Duran. All the workings are produced of ordinary ore 14½ cargas, so that the remittance to Duran last Saturday was 493 cargas, and I have sold two cargas of bonito; total extraction from the mine of 500 cargas. Outlay for the week ending Aug. 25 was \$2729.81, returns from the mine of San Cayetano de la Ovejera for the week ending Sept. 1, \$4165.98; outlay, \$2965.10.

OPENING MUSEUMS ON SUNDAY.—It has often been declared that it is the working men who desire to have museums opened on Sunday, though miners, who are naturally religiously disposed, have always desired this, and there is no doubt that their view is correct. In connection with the obituary notice of Mr. T. B. Smithies, Editor of the British Workman, it is mentioned that in a conversation with the late Mr. Mark Lemon, the Editor of Punch—which was always inclined to profanity—Mr. Smithies expressed his belief that the working men of this country are sounder than many professing Christians, being wide awake to the fact that if the barriers which surround the Lord's day in this country were broken down ultimately they would have to do seven days' work for six days' pay. This state of things has already been reached in France. Mark Lemon admitted that he got up a petition in favour of opening the British Museum on Sundays, and sent into their printing office for signature. The men returned it through their foreman without a signature, refusing to sign because "they did not think that would be the end of it—it would only be the thin edge of the wedge, and they thought that before long workshops, offices, and all kinds of places as well as museums would be open on Sunday too." Mark Lemon admitted the truth of the argument, and acted accordingly.

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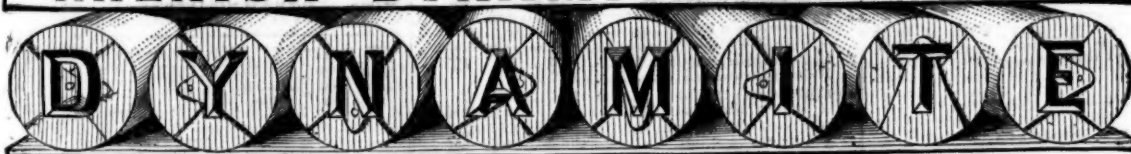
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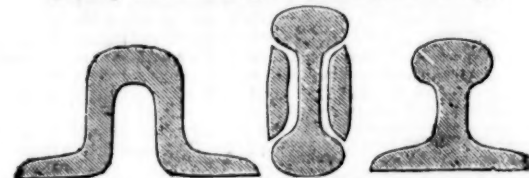
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